SPECIAL STUDY

Telecommunications Sector Review

February 2013

EBRD EVALUATION DEPARTMENT

Special Study

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EvD produces thematic or sectoral level evaluation reports in the form of Special Studies to provide valuable insights to strengthen operational outcomes and institutional performance. They focus on larger issues for which a transactions lens is unsuitable and provide more generally applicable findings for a wider audience. The larger scope of these studies facilitates the use of innovative and robust evaluation methods. This study forms one of eight such studies scheduled for EvD's 2012 Work Programme.

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Abbreviations

ADSL	Asymmetric Digital Subscriber Loop
ARPU	Average Revenue Per User
BEREC	Body of European Regulators for Electronic Communications
BSA	Bit Stream Access
CDMA	Code Division Multiple Access
COO	Countries of Operation (of EBRD)
DOCSIS	Data Over Cable Service Interface Specification
DSL	Digital Subscriber Loop
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortisation
EDGE	Enhanced Data Rates for GSM Evolution
EC	Electronic Communications
EU	European Union
GDP	Gross Domestic Product
GNI	Gross National Income
GPRS	General Packet Radio Service
GSM	Global Standard for Mobile communications
HSPA	High Speed Packet Access
ICT	Information and Communications Technology
IFI	International Financial Institution
IMF	International Monetary Fund
IP	Internet Protocol
IRR	Internal Rate of Return
ISP	Internet Service Provider
IT	Information Technology
ITU	International Telecommunication Union
LLU	Local Loop Unbundling
LRIC	Long Run Incremental Cost
LTE	Long Term Evolution
LTP	Legal Transition Programme (EBRD)
LTT	Legal Transition Team (EBRD)
MMS	Multimedia Message Service
MVNO	Mobile Virtual Network Operator
NGN	Next Generation Network
OECD	Organisation for Economic Co-operation and Development
OPER	Operation Performance Evaluation Review
PPP	Purchasing Power Parity
SIM	Subscriber Identity Module
SMS	Short Message Service
TC	Technical Cooperation
TIM	Telecommunications, Informatics and Media
UMTS	Universal Mobile Telecommunications Service
UNECE	United Nations Economic Commission for Europe
VDSL	Very high bit rate Digital Subscriber Loop

WiFi	Wireless Fidelity
WiMax	Worldwide interoperability for Microwave access
WTO	World Trade Organisation
XMRA	eXtended Monitoring Review Assessment

Defined terms

“EBRD” or “the Bank”	European Bank for Reconstruction and Development
EvD	Evaluation Department of the EBRD
Evaluation team	Staff of the EvD conducting the study, together with the sector consultants
ICT team	The EBRD sector team responsible for the preparation and implementation of the telecommunications projects and formerly known as the "TIM Team".

Executive summary

This report has two objectives:

- to present the results of an independent evaluation of the implementation of the parts of the 1999 sector policy related to the Bank's telecommunications sector ("telecoms") (as opposed to IT and media) that covers telecoms projects signed by the ICT team between 2006-11 (the "evaluation period")
- to present issues and ideas which may be useful in the preparation of a new sector policy,.

The telecoms projects were evaluated according to the following criteria:

- **Relevance**: the extent to which they fit Bank policies and country priorities.
- **Effectiveness**: the extent to which they attained their stated objectives.
- **Efficiency**: the extent to which they obtained results (especially financial) effectively.
- **Transition impact and sustainability**: the extent to which they helped beneficiary countries in their transition to market economies in a sustainable manner.

Evaluations of seven sample telecoms projects (the "case study projects") along with desk reviews of 10 other projects formed the basis of the evaluation of Bank performance. These 17 projects accounted for almost 80 per cent of the total 22 telecoms projects signed by the Bank during the evaluation period.[1]

Bank performance is rated overall as "partly successful". In respect of the evaluation criteria listed above, the operations are rated as follows:

- *Relevance is rated "good"*

All 17 projects examined can be regarded as having objectives consistent with those set in the 1999 sector policy and most had two or three such objectives. The main deficiencies arose from potential conflicts between strengthening particular market participants and increasing competition, as well as the weak additionality of some projects. However, the 1999 sector policy objectives became increasingly outdated and several country strategies where operations occurred did not identify telecoms as a target sector.

- *Effectiveness is rated "satisfactory"*

Of the seven case study projects, four fulfilled most of their operational objectives and three fulfilled only some. In the latter three projects, the Bank's clients failed to make planned acquisitions or introduce required services. In isolated cases, there were conflicts between project objectives and sound regulatory policies or market trends.

- *Efficiency is rated "marginal"*

[1] For the purpose of this evaluation, project extensions, debt/equity projects with the same client and regional projects with the same client were counted as one project.

This rating was mainly due to the disappointing performance of equity investments that substantially failed to meet financial projections, generating large (although not yet realised) losses. Debt financing projects also fell short (but to a lesser extent) of financial projections. The weak financial performance of projects can be attributed mainly to stronger than expected competition or regulation, as well as the impact of the financial crisis. There were also some deficiencies in the Bank's handling, primarily related to the limited level of Bank involvement in the investee companies and shortcomings in due diligence in other projects.

- *Transition impact and sustainability is rated "satisfactory"*

Four projects largely achieved their transition objectives, while the three others achieved them to a lesser degree. Projects had limited success in achieving key objectives where there was increased competition or market expansion.

Increasing competition was a particular area of inquiry for this evaluation. Six of the seven case study projects included it as a transition impact objective. By supporting an alternative operator, all projects contributed to increasing competition to some extent. However, wider impact was limited, mainly due to deficiencies in the regulatory regime (for instance lack of balance in fixed telephony tariffs or lack of regulation of mobile termination rates) and strong opposition from incumbent operators (expressed through administrative "red tape" or claims of "limited capacity"), which alternative operators experienced when trying to build new, or access existing, physical networks operated by incumbents, even following favourable regulatory rulings.

Moreover, the inability to conclude planned acquisitions (to strengthen or consolidate client companies) and/or the high cost related to being a third mobile operator in a small country, further limited the impact of the Bank's projects.

Comparative analysis of the country transition ratings in the telecoms sector (in the assessment of which "competition and private sector involvement" are key elements), contained in the Bank's Transition Reports of 2006 and 2011, indicates that 39 per cent progressed with transition in this sector while 61 per cent did not make any observable progress (see table 2).

Analysis of telecoms services price movements in the Bank's countries of operations (COO) between 2008 and 2011 demonstrates a more favourable trend. Between 2008 and 2011 average relative prices decreased in almost all services in the Bank's COO (expressed as percentage of GNI per head). Notable exceptions were fixed telephony in Albania, where the Bank assisted privatisation of the dominant operator, and in Serbia, where the Bank supported the development of an alternative operator. Also, the prices of fixed broadband increased in Romania while prices of mobile telephony rose in Montenegro and Slovenia. The largest price drops were registered in fixed broadband in Azerbaijan, Georgia and Moldova (a 10-24 per cent decrease as percentage of GNI per head) however, they remained still relatively high in the latter country (see table 3.2).

The Bank tried to address sector transition primarily through technical assistance to train regulatory officials and improve the regulatory and legal environment. In total, 16 TC projects were implemented in 12 countries during the evaluation period. These TCs were designed and managed by the Bank's Legal Transition Programme but they were closely coordinated with the ICT team in most cases and attempts were made to correlate them with the Bank's investment projects.

Out of the 12 countries where the Bank's TC projects were implemented, five made progress in the sector transition – namely, Albania, Armenia, Mongolia, Montenegro and Serbia. Six other countries[2] remained at the same transition level as in 2006, despite multiple TC projects in some cases (as many as three in Kazakhstan).

According to the 2012 Transition Report, "large" transition gaps still remain in the telecoms market structure (an indicator primarily concerned with mobile and fixed line competitiveness) in six countries of operations, while in terms of market-supporting institutions (an indicator assessing mainly the adequacy of regulatory environment) similar gaps remain in five countries, including two in which Bank TCs aiming to improve regulatory environment were implemented during 2006-11.

According to the government officials and private investors interviewed for the case studies, most of the telecoms services price decreases in the case study countries can be attributed to EU regulations rather than the impact of Bank investment or TC projects. In confirmation of this, seven (63 per cent) of the countries that made progress in the telecoms transition during 2006-11 were either EU members or applicant countries.

During the evaluation period the Bank participated in two privatisations, in Albania and Poland respectively, both of which are evaluated here. Private ownership was achieved in respect of both projects, although the objective of "more widespread" private ownership was missed as the incumbents were sold to single strategic investors. There were also five other privatisations during the evaluation period in the Bank's countries of operations outside the EU in which the Bank (or other IFIs) played no part (see table 3.1).

Outside of privatisations, the Bank's relative contribution in financial terms was small. In Russia the Bank provided much less than 1 per cent of the financing arranged in telecoms during the evaluation period, and in other Bank countries of operations outside the EU, Bank financing was only about 5 per cent of that committed by the private sector for a group of new projects independent of International Financial Institutions (IFIs).

Based on the evidence assessed, it may be concluded that the Bank played a substantial but mainly catalytic role in smaller or early transition countries (such as Albania, Serbia and Moldova) by arranging financing, encouraging investment, contributing to regulatory and legal reform and generally assisting with transition. However, its overall wider impact in larger or more advanced countries (such as Russia, Kazakhstan or Ukraine) appears to be minimal.

Key findings

Relative weakness of alternative operators in the Bank's COO

Alternative operators, while energetic, often lack economies of scale. As the Bank's projects in Serbia and Moldova prove, actions to consolidate alternative operators can bring about economies of scale and thereby stimulate competition and have strong transition impact. However, attention should be paid to avoid strengthening the positions of operators already dominant in other markets (such as cable television), while supporting their broadband expansion.

[2] Transition in Kosovo, where one of the Bank's TC projects was implemented, was not rated in either the 2006 or 2012 Transition Reports.

The Bank's role in privatisation

There are still large telecoms companies directly or indirectly owned by the state, even in some advanced transition countries. The EBRD may still play a role in accelerating or enabling privatisation as strategic investors still prefer to co-invest in this sensitive sector alongside institutions, such as the Bank, which provides additional political comfort.

Need for a shift in the focus of technical cooperation projects

TC projects for regulatory and legal strengthening are usually run alongside telecoms banking projects by the EBRD's Legal Transition Programme (LTP) and are generally well regarded by the industry practitioners. However, market participants commented that the staff of regulators and judges in commercial courts would benefit from a better acquaintance with practical solutions to day-to-day regulatory problems applied elsewhere, especially in respect of strengthening the enforcement of regulation.

Impact of rapid evolution in the sector on the Bank's expectations

Taking Albania as an example – like most countries of operations, Albania historically had low fixed telephony penetration rates. However, after the privatisation of the incumbent Albtelecom, the expected rise in fixed telephony connections did not materialise, as demand for fixed telephony was replaced by demand for mobile telephony. Correspondingly, the desired fall in employees per fixed line (set as a transition impact benchmark) became difficult to achieve.

Legal due diligence in the sector

Sectors such as information and communications technology (ICT) have their own specific laws and regulations. However, there are also general laws and regulations that apply to all sectors. For instance, in many countries there are specific regulations governing telecoms companies that have become dominant in their markets, but stopping companies from becoming dominant is a matter for general competition law. In the case of the Sun Communications project in Moldova, the Bank worked closely with the regulator but the decision preventing the client from acquiring new companies (which was the project's main objective) came from the Anti-Monopoly Commission.

Changing patterns of consumer behaviour

As illustrated by the Bitė investment in Latvia, consumers nowadays often have more than one mobile phone or SIM card. Operators assign telephone numbers for all of them and add to their numbers of subscribers. Consequently, an operator having many subscribers (especially prepaid) can have very low or no revenues and therefore its real value can be much lower than it seems based on subscriber numbers. This is an important consideration for due diligence.

Risk management

Alternative cable television companies and internet service providers operate in highly competitive markets and remain exposed to many acute risks such as changes in technology and regulation. As the Bank's investments in Sun Communications or Bitė demonstrate, straight equity financing can be very vulnerable and may result in substantial losses. Other types of financing (such as quasi-equity with a minimum return) need to be considered more often for such projects.

Impact of number portability regulation on competition

Unrestricted number portability is regarded as critical for the promotion of competition in mobile telephony. However, as demonstrated in the experience of Tele2 in Russia, operators can increase competition and expand the market without number portability in regions where mobile penetration is low. Indeed, in such regions, number portability might lead competing operators to pursue the same high-usage customers instead of expanding the market. Moreover, in all regions, number portability might increase concentration instead of increasing competition if termination rates are so high that customers are attracted to the same networks as their frequent contacts. In such cases the reduction of termination rates should precede or accompany the introduction of number portability.

Considerations for a new policy

Expansion of broadband penetration – the main direction in telecoms sector development

As demonstrated during the Polkomtel privatisation in Poland and also highlighted in recent projects, the main development in telecoms over the next few years will be the growth of high speed broadband access (including 4G) using wireline or wireless technologies. For rural and remote areas, penetration will be increased by using various distinctive funding schemes such as minimum subsidy auctions and market arrangements, such as municipal open access. In developing its new sector policy, the Bank should consider ways to better emphasise the opportunities for financing broadband infrastructure with both operators and local authorities, particularly those which strengthen alternative operators (through consolidation, for example).

Incorporating the promotion of e-business or e-government as part of the Bank's policies for different sectors and strategies for selected countries

Relatively low use of internet in the Bank's COO remains a key limiting factor for sector growth. Supply-side investment in ICT infrastructure needs to be supported by demand-side use. Yet, as demonstrated during the Sun Communications project in Moldova, in some of the Bank's COO, broadband availability exceeds broadband take-up, for businesses as well as households. More vigorous promotion of e-business and e-government by the Bank's projects across different sectors could help facilitate the telecoms sector development. The link between the new telecoms policy and other sector policies should be considered, particularly in respect of the small and medium-sized enterprise (SME) and municipal and environmental infrastructure (MEI) sectors, as well as country strategies for early transition countries (ETCs). Integration of e-business and e-government into different sector policies and country strategies could to a certain extent follow the example of energy efficiency, which is now well integrated into the Bank's projects across all sectors.

Financing network development in low population density regions

As the Tele2 experience in Russia demonstrates, regional operations outside the capital can be successful in large countries if they can keep their costs low enough to take account of the low population densities and low incomes in those regions. To do so, telecoms operators might need to use terrestrial or satellite wireless technologies instead of wireline ones. Such Bank projects would benefit regional development and could have strong transition impact and additionality.

Participation in major privatisations

There are still several large telecoms companies in the Bank's COO which are state owned and which might be privatised in the future. The Bank might play an important role in guiding partner countries and individual clients through privatisation, including ensuring effectiveness of the regulator and providing co-financing to strategic investors.

Refocusing telecoms TCs

In terms of policy dialogue and further technical cooperation, the Bank should continue to support the staff of regulators and judges (through the LTP, for example), but focus more on the effective monitoring of compliance and enforcement of regulations than on new legislation. Topics for the staff of the regulator might include cost modelling, spectrum auction design and scrutiny of local loop unbundling and number portability processes. Topics for judges in commercial courts might include the consequences of delaying the execution of regulatory decisions.

Regular policy updates

The ICT sector, including telecoms, is subject to particularly fast changes in technology, consumer preferences and market patterns Therefore, the Bank's operating priorities set for such a sector may become obsolete within years or even months. To ensure it stays abreast with the changing environment, the Bank should consider introducing regular (either annual or semi-annual) reviews of its ICT operations policy.

Considerations for project design and execution

Setting transition benchmarks

When setting transition benchmarks for telecoms projects, the Bank should take account of shifts in demand experienced in the telecoms markets and in consumer preferences elsewhere. In particular, it should note the possibility of mobile telephony substituting for fixed telephony, as well as the expansion of mobile broadband.

Legal due diligence

In addition to analysing telecom-specific regulations, due attention should be paid to general laws (particularly anti-monopoly and competition) which can have profound impact on telecoms sector projects.

Taking account of regulatory side effects

When supporting changes in the regulatory environment, the Bank should take account of the side effects of regulation experienced in comparable circumstances elsewhere. In particular, the relevance of the levels of termination rates and telephony penetration to number portability should be considered.

Analysing subscriber base

When assessing the viability of an investment in a telecoms operator, it is vital to distinguish between the number of active subscribers and the total number of subscribers. An operator can have an impressive subscriber base but little or no cash flow coming from it.

Financing high risk operations

When financing operations in highly competitive and risky markets, particularly with smaller telecoms operators, first consider providing quasi-equity or subordinated debt rather than straight equity to mitigate the risk of financial underperformance.

1. Introduction

1.1 Scope of this report

The information and communications technology (ICT) sector, particularly its telecommunication sub-sector ("telecoms"), is central to modernising the economies of the Bank's countries of operations and to narrowing the technology gap between them and others. Improving the Bank's operations in telecoms can stimulate transition and contribute to the development of the countries.

Bank ICT operations have been guided so far by the 1999 Telecommunications, Informatics and Media Sector Policy (BDS99-13) (the "1999 sector policy"), which replaced the policy of 1992. The 1999 sector policy has been made largely obsolete by the fast development of ICT and the market changes caused by the financial crisis of 2008-2009. In 2013 the Bank intends to develop and adopt a new ICT policy to guide its operations in this sector in the coming years.

This report has two objectives:

– to present the results of an independent evaluation of the implementation of the parts of the 1999 sector policy related to the Bank's telecoms sector (as opposed to IT and media) that covers telecoms projects signed by the ICT team between 2006-11 (the "evaluation period")

– to present issues and ideas which may be useful in the preparation of a new sector policy.

The 1999 sector policy is concerned with telecoms, informatics and media (TIM). Its replacement will be concerned just with ICT, which has a narrower scope than TIM, which also excludes media (press publications, outdoor advertisements and so on). For this purpose, the scope of ICT consists essentially of those parts displayed in Figure 1. The main terms used here are explained in Annex 1.

Figure 1: Activities in information and communications technology

Electronic communications		Information technology			
Telecommun-ications	Broadcasting	Electronic content invention	System integration and operation	Program implementation and configuration	Equipment design and fabrication

Increased competition is a major indicator used to assess the transition impact potential and risks of Bank operations in telecoms.[3] This report therefore looks particularly at the Bank's role in increasing competition in telecoms markets. Such competition has been historically weak as the provision of telecoms services depended strongly on a few large companies. In contrast with information technology markets, most telecoms markets have large companies with extensive national physical network infrastructures that have been state-owned or that use individually-licensed radio frequencies. These

[3] The Bank's Office of the Chief Economist assesses a country's transition in telecommunications based on two indicators: the market structure indicator (50 per cent) and the market-supporting institutions and policies fixed indicator (50 per cent). Sixty per cent of the first indicator relates to competition and private sector involvement in mobile and telephony, while seventy per cent of the second indicator relates to the regulatory framework, primarily that enabling competition in the telecom sector.

markets form the focus of this report; the same focus is apparent in the objectives of the 1999 sector policy, as shown in Box 1.1.

Box 1.1: The 1999 sector policy

The 1999 sector policy was largely concerned with electronic communications (particularly telecoms) but it also called for participation in information technology and media projects. Media projects (dealing with press publications and outdoor advertisements, for example) could be regarded as publishing projects but not as ICT projects, though there are possible substitutes in ICT. The 1999 sector policy had the following objectives:

- to promote sustainable network expansion, increase telephony density and improve service quality
- to foster the emergence of innovative and advanced communications services crucial to the overall competitiveness of businesses within a country
- to assist incumbent operators and the government in accelerating privatisation
- to develop appropriate regulatory and legal frameworks
- to extend development of the sector beyond basic telephone services, including media, and promote access to communications and information.

1.2 The approach to project evaluation

The Bank signed 22 telecoms projects (listed in Tables 6, 7 and 8 in Annex 3) during the evaluation period. [4] To evaluate actual implementation of Bank policies, the evaluation team (in consultation with the ICT team) selected six sample projects, each from a different country at a different stage of transition, namely Albania, Latvia, Moldova, Poland, Russia and Serbia.[5] The evaluations entailed analyses of country, sector and project documents; interviews with policy makers, regulators, bankers, clients and customers of clients; and project site visits.

The only telecoms project signed during the evaluation period, which has already been evaluated as an Operation Performance Evaluation Review (OPER) is Braeside Investments in Ukraine[6], which was added to the sample projects to form a collection of seven projects (the "case study projects"), on which this evaluation has been based. These projects are listed in Table 6 in Annex 3.

The case study projects represent half of the telecoms clients and projects in Albania, Latvia, Moldova, Poland, Russia, Serbia and Ukraine (the "case study countries") and a third of the total telecoms clients and projects signed during the evaluation period.

[4] Repeated or multiple country projects with the same client, as well as separate debt and equity projects, with the same objectives, are counted as one project. Telecoms sub-sectors covered by this evaluation are defined in Annex 1.
[5] The project in Latvia was actually part of a regional one that also covered Lithuania. The operations in both countries were examined but the evaluation presented in this report focusses on those in Latvia.
[6] PE10-491

Moreover, to assess the fit between projects and policies, the evaluation team conducted a desk review of documentation related to 10 additional projects which together with the case study projects formed a sample of 17 policy review projects (the "policy review projects").

Each of the case study projects was rated on a three-point scale (comprising "+", "+/-" and "-") against each of five indicators: fit with Bank policies, achievement of project objectives, financial performance, Bank handling and transition impact. The resulting ratings are justified and discussed in Annexes 6-11 for all of the Case Study Projects except Braeside Investments (in Ukraine), which already had an OPER.

The evaluations of individual case study projects in aggregate contributed to the findings and the assessment of the Bank's telecoms operations and their impacts. This overall assessment uses the Organisation for Economic Co-operation and Development (OECD) criteria adopted by IFIs for development assistance (displayed in Box 1.2). It also uses a six-point rating scale consistently throughout this report ("excellent", "good", "satisfactory", "marginal", "unsatisfactory" and "highly unsatisfactory"). The indicators and ratings used in the evaluations of the case study projects can be related to the OECD criteria.[7]

Box 1.2: OECD assessment criteria for development assistance applied in this report

- **Relevance**: the extent to which they fit Bank policies and country priorities.
- **Effectiveness**: the extent to which they attained their stated objectives.
- **Efficiency**: the extent to which they obtained results (especially financial) effectively.
- **Transition impact and sustainability**: the extent to which they helped beneficiary countries in their transition to market economies in a sustainable manner.

In order to assess the overall impact of the Bank's interventions (including its TC projects) at the macro level, the evaluation team analysed the changes in telecoms sector's transition ratings of the countries of operations contained in the Bank's 2006 and 2012 Transition Reports. The outcome of these analyses, combined with those performed on the data provided by the International Telecommunication Union (ITU), contributed to answering key evaluation questions (as highlighted in Sections 2.4, 3.4 and 5.4), chief of which was – what impact did the Bank have in the telecoms sector in its countries of operations during the evaluation period?

1.3 Related policy studies

This report takes into account "EBRD and the knowledge economy: a multi-pronged approach to ICT and innovation" (the "knowledge economy paper") endorsed by the Board in 2011. The knowledge economy paper examined how the Bank could help to speed up the transition of a country to a knowledge economy.[8] Its position on ICT is summarised in Box 1.3.

[7] In particular, "fit with Bank policies" amounts to relevance and "fulfilment of project objectives" amounts to effectiveness, while "financial performance" and "Bank handling" are aspects of efficiency. The three-point scale used for case study projects evaluation is related to the six-point scale by identifying "+" with "excellent" and "good", "+/-" with "satisfactory" and "marginal", and "-" with "unsatisfactory" and "highly unsatisfactory".

[8] Meaning structures and institutions to let it innovate and thereby generate total factor productivity growth.

Box 1.3: The knowledge economy paper

The knowledge economy paper identified four main requirements for a knowledge economy – namely ICT infrastructure; adequate economic and legal institutions; good education and training; and established innovation systems (such as networks of foreign firms, local firms, the state, universities and research institutes). The paper noted the widespread view that ICT contributes to productivity growth and facilitates "green growth" in all sectors of the economy, including industrial automation, transport management and office administration. It proposed a change in focus for the ICT team so that the Bank could support innovation more actively. With the change in focus:

- Two thirds of the pipeline for the team in the near term would be likely to address infrastructure needs, including broadband, 4G networks and, in some countries, 2G and 3G networks.
- The team would look for ICT opportunities that provide infrastructure that supports innovation, such as IT service providers, data centre providers, equipment and systems producers, electronic content providers, incubators and accelerators.
- There would be a new venture capital investment programme building a portfolio of higher risk and higher return equity deals using external expertise and partner funds.
- The team would no longer have media projects as a core activity (the name of the team was changed from "the TIM team" to "the ICT team").

This report also takes into account the previous ICT sector evaluation, “Telecommunications, Informatics and Media Sector Policies” (PE05-324S) of 2006 (the "2006 sector evaluation"). The 2006 sector evaluation reviewed the Bank’s telecoms policies of 1992 and 1999, assessed the Bank’s performance in telecoms, summarised evaluation findings and identified future opportunities. The main recommendations are summarised in Box 1.4.

Box 1.4: The 2006 sector evaluation – main recommendations

- A new telecoms policy should address the needs of the early and intermediate transition countries more clearly.
- Country strategies should provide more specific guidance on concrete and realistic operational objectives for ICT.
- Policy dialogues with countries of operations having large remaining sector transition challenges should be intensified.
- Attention should continue to be paid to restructuring and upgrading fixed telephony in some countries.
- New financing models (such as infrastructure funds) might be needed to finance the replacement or expansion of infrastructure.

- More intensive technical cooperation might be needed to provide guidance on the sequencing of sector reform. It also should be conditional on reform decisions.
- Incentives for staff undertaking technical cooperation should be introduced to reduce the bias in favour of investment operations. More intensive technical cooperation might be needed to provide guidance on the sequencing of sector reform. It also should be conditional on reform decisions.
- Incentives for staff undertaking technical cooperation should be introduced to reduce the bias in favour of investment operations.

The 2006 sector evaluation's view was that by underestimating the complexity of sector reform and the need for technical assistance throughout the process, the Bank had limited impact, especially in early and intermediate transition countries. However, the Bank's overall performance in ICT and media during 1991-2005 was evaluated as "successful".

The strong results for effectiveness and efficiency (rated "good" and "excellent" respectively) were tempered by "satisfactory"/"good" ratings for relevance and transition impact and sustainability. The excellent financial results for ICT were helped by favourable market conditions during that period (especially the spread of mobile telephony).

The 2006 sector evaluation pointed out that the Bank had a significant impact on telecoms in some advanced and intermediate transition countries because of its role in fixed network operator restructuring in earlier years and in mobile network market expansion in later years. It considered that further efforts were needed to achieve a great impact in various early and intermediate transition countries and to ensure that TCs were followed up on.

1.4 Structure of this report

Sections 2, 3, 4 and 5 apply the OECD evaluation criteria described in Box 1.2 to the Bank's telecoms operations. They use the detailed evaluations of the case study projects, the limited reviews of the other policy review projects, and international statistical information.

Section 6 identifies findings and recommendations. They stem directly from the evaluations of the case study projects in Annexes 6-11, where they are presented in more detail.

Annex 1 provides expansions of the abbreviations and explanations of the phrases relating to regulation and technology that are used in this report.

Annex 2 provides analyses of the Bank's ICT portfolio over the years 1992-2011 and across countries of operations.

Annex 3 provides details of the case study projects, policy review projects and other telecoms projects (signed by the Bank but not reviewed under this study) as well as key statistics on projects signed in the telecoms sector by other IFIs during the evaluation period.

Annex 4 describes selected findings and recommendations from past Bank ICT project evaluations.

Annex 5 compares the seven case study countries, six EU comparator countries (Austria, Denmark, Germany, Lithuania, Slovenia and Sweden) and five countries from recent expansions of the Bank mandate (Egypt, Jordan, Morocco, Tunisia and Turkey). The comparisons include indicators of ICT development as well as of economic and legal development.

Annexes 6 to 11 are the detailed studies of Albania, Latvia, Moldova, Poland, Russia and Serbia respectively. Each quantifies market shares, outlines telecoms policies, evaluates a case study project, summarises findings and recommendations and identifies the people consulted (other than Bank staff).

Annex 12 discusses the southern and eastern Mediterranean (SEMED) countries of operations. It quantifies market shares, outlines telecoms policies, and comments on the findings and recommendations from the Bank's telecoms project evaluations that are most relevant to these countries.

2. Relevance

2.1 Summary

The relevance of Bank telecoms operations is the extent to which they fit the policies and priorities of the Bank and the countries. In this evaluation it is taken to be the extent of the fit of telecoms projects with Bank policy objectives and the fit of Bank policy objectives with country needs.

The evaluation reached the following conclusions:

– The fit of telecoms projects with Bank policy objectives can be rated as "good" as all 17 policy review projects (out of the 22 telecoms projects signed during the evaluation period) can be regarded as having objectives in the 1999 sector policy, and all except four can be regarded as having two or three such objectives. However, the fit is limited by potential conflicts between strengthening particular market participants and increasing competition, and the weak additionality of some projects: fitting with the 1999 sector policy does not ensure fitting with other Bank policies (on increasing competition, for example). Nevertheless, four of the seven case study projects fitted fairly well with overall Bank policies and the other three fitted with them to some extent.

– The fit of Bank policy objectives with country needs can be rated as "satisfactory". It is limited by the 1999 sector policy itself being now outdated and the neglect of telecoms and ICT in some country strategies.

Overall, the relevance of Bank ICT operations is assessed as "good".

2.2 Fit of telecoms projects with Bank policy objectives

Figure 2: Rating of case study projects for the fit with Bank policy objectives

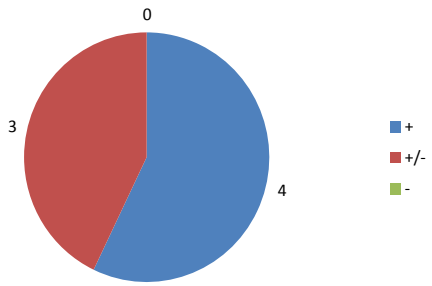


Figure 2 summarises key conclusions of the detailed evaluations, i.e. that all seven case study projects can be seen as broadly consistent with Bank policy objectives (except, in certain cases, for their additionality, which is discussed in Section 2.4.5).

However, two case study projects, although consistent with the 1999 sector policy objectives, might have endangered competition by increasing market concentration too much. Although there is no clear evidence that in these cases consumers were hurt by increased concentration, the potentially negative consequences of such concentration do not seem to have been considered fully in this regard during due diligence. The following two examples in particular are relevant in this regard:

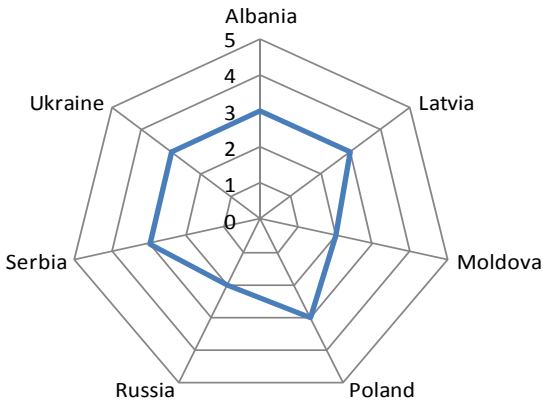
– In the Sun Communications project in Moldova, the main objective was for the client to acquire other fixed television operators, especially in the capital Chisinau where it already had a high market share in fixed television. By doing this, the project was expected to strengthen competition in fixed telephony; however, it would have weakened competition in fixed television. Ultimately, this did not happen due to objections by the Anti-Monopoly Commission and the high price valuations of the intended acquisition targets.

– In the Braeside Investments project in Ukraine, one of the two main objectives was for the client to acquire other fixed television operators in towns outside the capital Kiev. However, the client had the same owner as another company which had a high market share in fixed television in the capital and the two companies were merged one year after the closing of the financing transaction. The merged company has high market shares in various places and has had several court disputes with the Anti-Monopoly Commission.

2.3 Fit of Bank policy objectives with country needs

A view of how well the Bank's policy objectives fit the needs of countries can be obtained by looking at the case study projects, which are likely to reflect some of the needs of the case study countries. There are five objectives in the 1999 sector policy listed in Box 1.1. Each of these policy objectives might fit a project, in that it is fulfilled if the project is successful; for instance, the 1999 sector policy objective of assisting incumbent operators and the government in accelerating privatisation fits two case study projects (in Albania and Poland). Thus the number of 1999 Sector Policy objectives fitting a case study project is a measure of how well the 1999 Sector Policy fits the needs of the corresponding case study country (as there is one such project per country). This number is displayed for each case study country in Figure 3, which indicates that typically two or three of the policy objectives fit each project. This would appear to indicate a fairly good fit between Bank policy objectives and the needs of countries.

Figure 3: Numbers of 1999 sector policy objectives reflected in particular case study projects



The objectives in the 1999 sector policy are, of course, general statements of direction that do not convey expectations in detail. The 1999 sector policy places relatively little emphasis on telecoms markets other than fixed telephony, but the main markets of Bank telecoms projects, as shown in Annex 3, included fixed broadband, fixed television and mobile telephony). More generally, some points in the 1999 sector policy were not widely reflected in individual projects as Bank client priorities continued to change. In particular:

– The 1999 sector policy devotes considerable attention to fixed telephony operators and state ownership yet already, as it observed, mobile telephony and private ownership were becoming more significant at that time. A policy devised some years later would not attach the same importance to increasing fixed telephony penetration, instead it might emphasise the need to make mobile telephony available and affordable everywhere by, for instance, monitoring coverage obligations and controlling mobile termination rates.

– A policy devised still more recently would stress the importance of the delivery of fixed broadband by either the incumbent fixed telephony operator or alternative operators (such as cable television operators) and non-discriminatory access to ducts and local loops. As the 1999 sector policy noted, there were already countries of operations at an advanced stage of transition and fixed broadband became important to some of them very rapidly.9

The 1999 sector policy envisaged that the majority of the financing would continue to be provided as debt but, though the proportion of equity transactions by value was 20 per cent before the start of the evaluation period, it was 50 per cent thereafter, as illustrated in Annex 2. In this respect the 1999 sector policy was not implemented. Moreover, quasi-equity for risk management was not used consistently, though again the 1999 sector policy expressed a preference for it.

While the 1999 sector policy served its purpose well for some years, it has become increasingly outdated because it does not take full account of changes in preferences among consumers (such as the use of mobile telephony instead of fixed telephony) and clients (such as the use of equity financing instead of debt financing).

2.4 Specific review questions

2.4.1 How did the operational focus of the Bank and its individual transactions in telecoms in 2006-11 incorporate and reflect the stated policy objectives?

For each of the five objectives in the 1999 sector policy (listed in Box 1.1), Figure 4 indicates how many of the 17 policy review projects appear to reflect the objective.[10] Among these projects:

– 13 (76 per cent) appeared to have an objective "to promote sustainable network expansion, increase the density of telephones and improve quality of service" – this was often the case for projects that were intended to provide telephony.

– 12 (71 per cent) appeared to have an objective "to foster the emergence of innovative and advanced communications services crucial to the overall competitiveness of businesses within a country" – this was often the case for projects that were intended to provide Internet access or cable television.

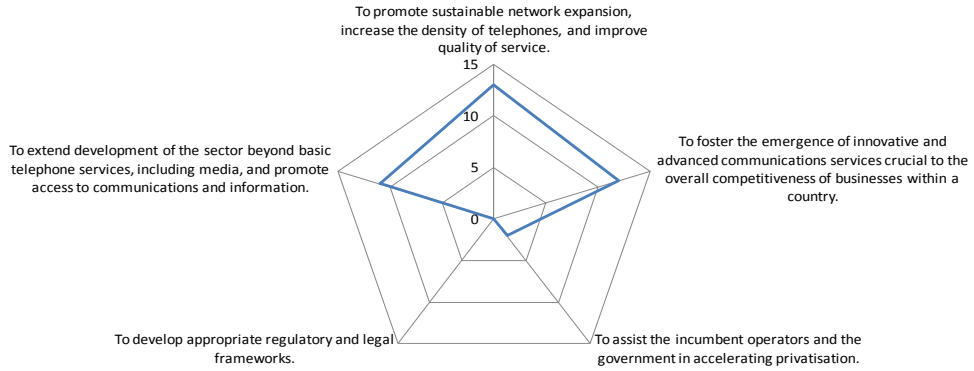
– 11 (65 per cent) appeared to have an objective "to extend development of the sector beyond basic telephone services, including media, and promote access to communications and

9 For instance, Lithuania is among the world leaders for optical fibre take-up by residential subscribers in capital cities, while, by contrast, Poland is ten percentage points below the EU average for both access to fixed broadband and use of the internet. Both Lithuania and Poland are regarded as being at an advanced stage of transition in the 1999 sector policy; the differences between them might be instructive for the replacement of the 1999 sector policy.

10 Often project justifications did not make explicit reference to the objectives of the 1999 sector policy, and we have had to infer the relevant objectives from close examination of the project details. Hence we often refer to "appear to have", not "have". Moreover, here we are examining the apparent objectives of projects, not the fulfilled objectives, as we are concerned with the relevance of Bank telecommunication operations, not the effectiveness.

information" – this was often the case for projects that were intended to provide Internet access or cable television.

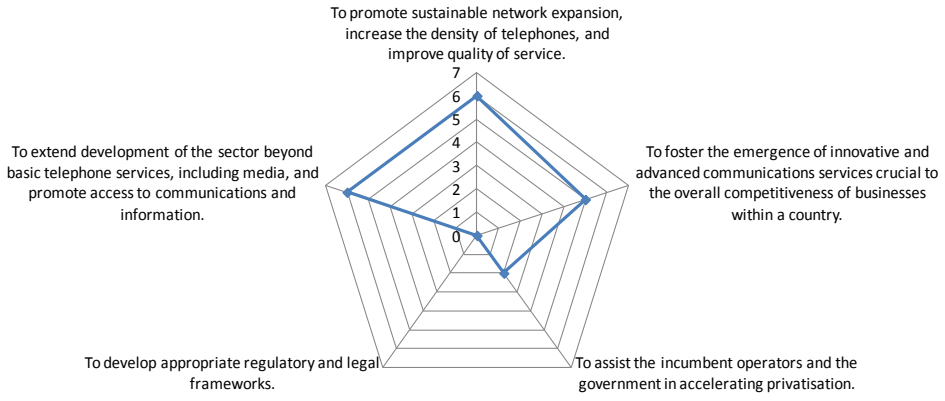
Figure 4: Numbers of policy review projects fitting particular 1999 sector policy objectives



Because most telecoms privatisations were performed before the evaluation period, the objective of assistance in privatisation appeared in only two of the policy review projects (as discussed in section 3.4.2). No policy review projects were explicitly concerned with the objective of developing appropriate regulatory and legal frameworks; this was addressed by the LTP (more details in section 5.4).

Figure 5 shows a very similar pattern for the case study projects, which therefore seem in this respect to be typical of the telecoms projects signed in the evaluation period.

Figure 5: Numbers of case study projects fitting particular 1999 sector policy objectives



2.4.2 How were changes in the market reflected in transaction selection?

The content of the ICT team's portfolio shifted in various ways over the past two decades (1992-2011),[11] as displayed graphically in Annex 2. In outline:

- Over time, the proportion of projects and the amount of debt financing tended to fall slightly in favour of equity financing. The variations between years were large and the evidence for the trend is inconclusive, however it generally reflects changing market sentiment in the sector in the past decade, where commercial banks became increasingly comfortable with the sector risk in the region (particularly before the financial crisis), while demand for equity financing increased as large privatisations, new ventures and private equity funds investments aimed to narrow the region's technological gap.
- Before 2001, virtually all of the projects provided financing for electronic communications (particularly telecoms); thereafter 59 per cent of the projects and 85 per cent of the funds were for electronic communications, with the balance being for information technology and media. Therefore there was a reduction in emphasis on electronic communications and this reflected the addition of media as a new sub-sector under the 1999 policy.
- Before 2003, 78 per cent of the projects and 70 per cent of the funds were for private sector clients, with the balance being for public sector clients. After 2003 virtually all of the projects provided financing for private sector clients. Indeed the projects related to state-owned companies were purely privatisations.

The shifts occurred at different rates in different groups of countries, depending approximately on their transition status. They are also presented in this way in Annex 2. In summary:

- The lowest proportions for debt finance projects (43 per cent by number of projects and 49 per cent by value) were in the countries that joined the EU in 2004 (Estonia, Czech Republic, Hungary, Latvia, Lithuania, Poland, Slovak Republic and Slovenia), reflecting the Bank's diminishing additionality in this region. The highest proportions (92 per cent by number of projects and 98 per cent by value) were in Central Asia (Kazakhstan, Kyrgyz Republic, Mongolia, Tajikistan, Turkmenistan and Uzbekistan).
- The lowest proportions for electronic communications (particularly telecoms) projects (62 per cent by number of projects and 72 per cent by value) were in the "candidate members" of the EU (FYR Macedonia, Montenegro, Serbia and Turkey) and the highest proportions (84 per cent by number of projects and 97 per cent by value) were in the countries that joined the EU in 2004.
- The lowest proportions for private sector projects (73 per cent by number of projects and 55 per cent by total value) were in the "potential members" of the EU (Albania, Bosnia and Herzegovina and Kosovo), reflecting demand for pre-privatisation financing. The highest proportions (100 per cent by number of projects and 100 per cent by value) were in Russia.

[11] The reference period is extended to include pre-evaluation period years in order to better illustrate trends in the telecoms sector portfolio.

The ways in which the Bank responded to the changing circumstances of its countries of operations, by altering the proportions of financing devoted to them, can again be expressed in terms of these groups of countries, as described fully in Annex 2. In particular:

- Bank telecoms projects fell sharply in those countries which joined the EU, reflecting their lower risk and the Bank's diminishing additionality. The proportions in the countries that joined EU in 2004 (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic and Slovenia) rose to 55 per cent by number of projects and 54 per cent by value before accession but fell thereafter to 21 per cent by number of projects and 38 per cent by value. The proportions in the countries that joined in 2007 (Bulgaria and Romania) rose to 27 per cent by number of projects and 23 per cent by value before accession but fell thereafter to 10 per cent by number of projects and 2 per cent by value.
- The Bank's involvement rose in countries preparing for EU accession as they were more receptive to accepting institutional and legal reforms while their untested regulatory environment still kept many commercial lenders at bay, creating opportunities for the Bank. The proportions in the "candidate members" of the EU (FYR Macedonia, Montenegro, Serbia and Turkey) rose from 3 to 13 per cent by number of projects and from 2 to 7 per cent by value. The proportions in the "potential members" of the EU (Albania, Bosnia and Herzegovina and Kosovo) rose from 3 to 10 per cent by number of projects and from 2 to 7 per cent by value.

Over the years, the value of the Bank's telecoms projects became much larger in Russia. The proportions of projects rose from 8 to 31 per cent by value but stayed unchanged, at 14 per cent, by number of projects.

2.4.3 Were transactions designed with sufficient clarity, specificity on benchmarks, milestones and intended outcomes relative to the priorities set in the Policy?

Most policy review projects were designed with clear, quantifiable and monitorable benchmarks and milestones, specific to transition impact priorities. Figure 6 illustrates which and how many of the seven transition indicators were reflected in the transition benchmarks set for the policy review projects[12]. Among these projects:

- 11 (65 per cent) had benchmarks related to increased competition
- 14 (82 per cent) had benchmarks related to market expansion
- 14 (62 per cent) had benchmarks related to demonstrations of new replicable behaviour and activities, especially new products or processes, successful restructuring and new ways of financing.

Because most telecoms privatisations were performed before the evaluation period, benchmarks related to more widespread private ownership appeared in only two of the policy review projects. No policy review projects were explicitly concerned with benchmarks for strengthened institutions, laws and policies to promote market function; these were outsourced to and implemented by the LTP (more details in section 5.4). The remaining benchmarks related to skill transfer and dispersion (in two of the projects) and improved standards for corporate governance and business conduct (in three of the projects).

[12] In some cases, benchmarks have been moved between indicators to achieve greater consistency of classification.

Figure 6: Numbers of policy review projects using particular transition impact indicators

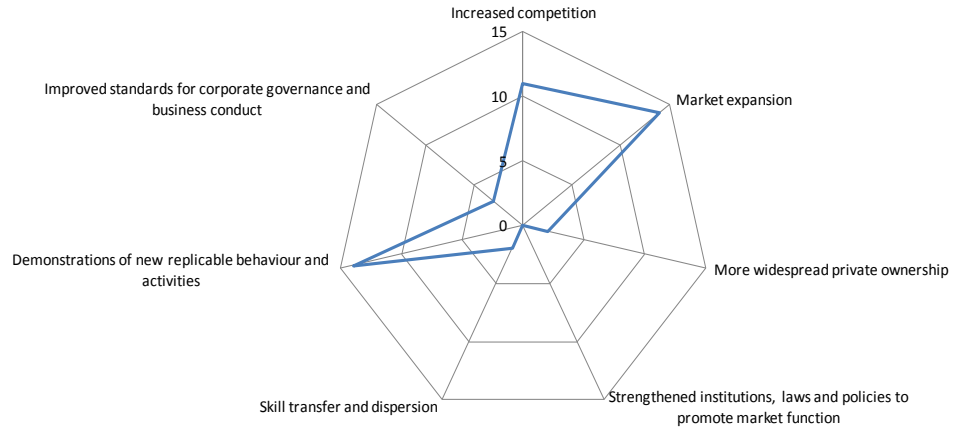
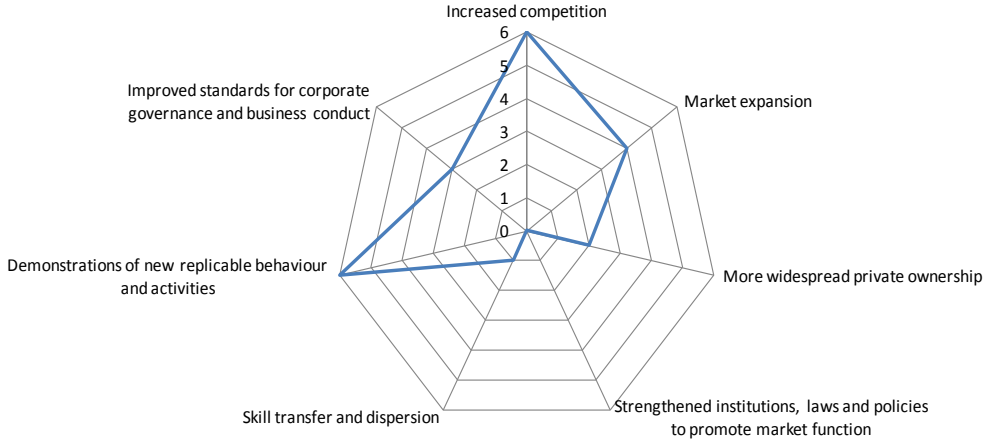


Figure 7 shows the corresponding information for the case study projects, which tend to use rather more indicators. This is partly because the evaluation of the case study projects made explicit the indicators that had been left implicit and partly because some policy review projects were processed through facilities intended to be lightweight.[13]

Figure 7: Numbers of case study projects using particular transition impact indicators



2.4.4 What were the main additionality criteria for individual transactions?

At approval, the main additionality criteria of the case study projects were the following:

– Provision of a sizeable tailor-made equity or quasi-equity financial package that was attractive to the lead investor (due to the expectation of the Bank to be "portfolio" or passive investor) – cited four times (Orion, Braeside Investments, Bitė, Polkomtel).

[13] Moreover, two projects that are not policy review projects (Shant in Armenia and Irshad Telecom in Azerbaijan), were processed through MCFF and did not specify transition benchmarks at all, as they were established as more general objectives at the facility level. This was in line with the Bank's policy in respect of some of its facilities, aiming to streamline and speed up the approval of smaller investments.

- Provision of political comfort, with country and sector knowledge and a perceived ability to address regulatory issues, such as discrimination, with the government through technical cooperation projects and on-going policy dialogue – cited four times (Alkbtelecom, Tele2, Sun Communications, Polkomtel).
- Provision of financing on terms more acceptable than those available on the (crisis, post-crisis or, in the case of Moldova, even pre-crisis) market, primarily in terms of longer tenor – cited three times (Albtelecom, Tele2, Sun Communications).
- Support (as equity co-investor) in the restructuring of the investee company or in the introduction of better corporate governance standards – cited three times (Bitė, Sun Communications, Polkomtel).
- Ability to ensure successful commercial mobilisation (through syndication or the encouragement of local bond investors) – cited two times (Albtelecom, Tele 2).

Four out of seven case study projects were signed after the 2008 financial crisis. The three case study projects signed in 2007 were Sun Communications in Moldova, Breaside Investment in Ukraine and Bitė in Lithuania/Latvia. The additionality of the first two projects was relatively strong due to the perceived high political risk associated with Moldova and Ukraine, as well as the absence of private investors in case of Moldova.[14] However, the case for the additionality of the Bank's investment in Bitė was weak and rested mainly on the argument that Bitė's emerging market origins and its weak financial performance in Latvia made it difficult to find co-investors. This argument was accepted and the transaction approved, but this was perhaps mainly due to the Bank's long standing relationship with the lead investor (Mid-Europa Partners, of which one of the partners is former Bank's Vice-President).

The additionality of ICT projects (as with most of the Bank's projects) became increasingly questionable in the years 2006-07, as reflected in the small number and volume of the signed projects. For example, the ICT team signed only three projects in 2006 (one in media and two in telecoms) and the aggregate volume of the Bank's 2006 telecoms projects was only €3.3 million. The year 2007 was slightly better for the ICT team as it signed 10 projects, of which seven were in the telecoms sub-sector, including the three projects mentioned above. The case study projects, Orion, Albtelecom and Tele2, which were signed during or shortly after the financial crisis and in the Intermediate Transition Countries, did not raise additionality questions. However, the additionality of the Polkomtel project signed in Poland in 2011 was subject to lively discussion by the Board. The case for its additionality rested on the provision of a sizable tailor-made quasi-equity package, which was attractive to the lead investor in the expectation of the Bank's support in the company's restructuring and the provision of political comfort. However, many Directors questioned these arguments[15] since such a transaction in a seasoned EU member country with a market leader and in an attractive sector raised the interest of many potential investors.

During the interviews with the evaluation team, the Bank clients stressed that EBRD participation gave others the confidence to invest and raised expectations of more judicious regulation. Although there is no clear evidence, the Bank's perceived ability to minimise political risk can be considered genuine as the telecoms sector is indeed highly politicised. Overall, the additionality of the telecoms projects represented by the case study projects is considered "largely verified".

[14] The OPER for Braeside Investments (PE10-491) assessed its additionality as verified in part, pointing out that Providence Equity Partners fund made a large investment into merged company only a year later.
[15] One of the Directors abstained from voting due to the unconvincing case for the project's additionality.

3. Effectiveness

3.1 Summary

The effectiveness of Bank telecoms operations is the extent to which they attain their stated objectives. In this evaluation it is taken to be the extent of the fulfilment of project objectives by telecoms projects and the fulfilment of Bank policies by telecoms projects.

The evaluation reaches the conclusion that:

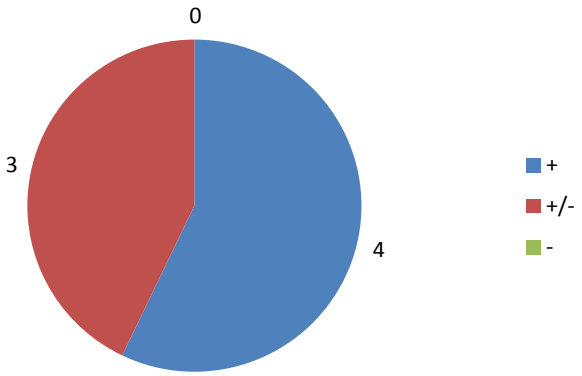
– The fulfilment of project objectives by telecoms projects can be rated as "satisfactory". It is limited by the failure of some of Bank clients to make planned acquisitions or introduce required services.

– The fulfilment of Bank policies by telecoms projects can be rated as "good". It is limited by the existence of project objectives, which might be seen as contrary to sound regulatory policies or emerging market trends.

Overall, the effectiveness of Bank ICT operations is assessed as "satisfactory".

3.2 Fulfilment of project objectives by telecoms projects

Figure 8: Rating of case study projects for the fulfilment of project objectives



Not all of the case study projects fulfilled their main objectives. In particular:

– In the Sun Communications project in Moldova, the main objective entailed the acquisition of other fixed television operators. However, the acquisitions made were smaller than planned and the role of acquisition in the company strategy was greatly reduced. Larger acquisitions were not made because regulators feared that certain acquisitions would decrease competition too much and because the acquisition targets demanded high prices when they knew that the Bank was involved.

– In the Orion project in Serbia, the main objective was for the client to reach certain targets for market shares and revenues by growing, both organically and by the acquisition of other fixed broadband operators, to create a national network. The board subsequently agreed to reduce the role of acquisition in the company strategy and extend the deadline for reaching the

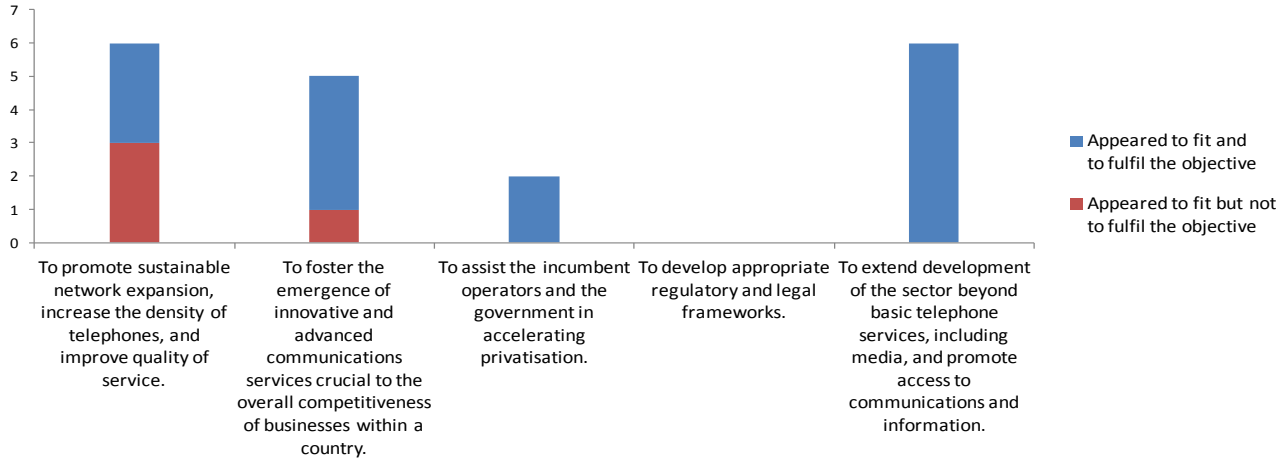
targets. Though acquisitions were made, they were smaller than planned because the originally intended acquisition targets became too expensive on hearing of Bank involvement.

– In the Braeside Investments project in Ukraine, the main objectives entailed the acquisition of other cable television operators and the improvement of service quality and range, especially in the acquired networks. Other companies were acquired, though not to the extent originally planned because of the high prices demanded. However, service quality and range were not improved, so the client was unable to offer adequate fixed broadband and abandoned any intention of offering fixed telephony.

3.3 Fulfilment of Bank policy objectives by telecoms projects

Among the case study projects there are those which were expected to promote sustainable network expansion (Serbia, for example), increase the density of telephones (Albania) and improve quality of service (Moldova). In some cases the expectations have not been fully met – for instance, fixed telephony penetration (which was the usual understanding of "the density of telephones" in 1999) is declining in many countries and when it increased in Albania, the increase accrued to competitors not to the Bank's client. The extent to which the 1999 sector policy objectives have been fulfilled by the case study projects is illustrated in Figure 9.

Figure 9: Rating of case study projects for individual 1999 sector policy objectives



By contrast with Figure 5 (illustrating how many case study projects appeared to have particular policy objectives), the intention of Figure 9 is to count how many case study projects have fulfilled, or are fulfilling, the objectives, so as to provide a view of the extent to which the 1999 sector policy has been, or is being, implemented. This view suggests, for example, that the two projects in Albania and Poland have succeeded in assisting the incumbent operators and the governments in accelerating privatisation, which was an objective of the 1999 sector policy.

The case study projects were signed during the evaluation period, so they are not fully representative of the projects signed after the adoption of the 1999 sector policy. For instance, the Bank has assisted incumbent operators and governments in accelerating privatisation, but the importance of doing so has

been reducing: the Bank was involved in modernising or selling eight state-owned operators before the adoption of the 1999 sector policy, four after the adoption of the 1999 sector policy but before the start of the evaluation period, and two thereafter. There are now only five countries of operations where the only fixed telephony incumbent operator is majority state-owned.[16]

The Bank was also developing appropriate regulatory and legal frameworks. During the evaluation period the LTP implemented 16 technical cooperation (TC) projects in 12 countries (all outside the EU), including Albania and Moldova (for which there are more details in Section 5.4). Importantly, the development of regulatory and legal frameworks was not an explicit objective of any policy review project, as formally such activities were implemented not by the "project teams" but by the LTP (albeit in coordination with the ICT team). Thus, Figure 9 indicates "0" for the fulfilment of the objective of developing regulatory and legal frameworks.

Nevertheless, as explained in Section 3.4.4, nearly half of the countries in which the TC projects were implemented made progress in transition.

Stakeholders in Albania, Latvia and Moldova confirmed the value of these programmes but suggested that TC projects should now focus on effective monitoring and enforcement whereby there would be stronger links with investment projects and ways of facing the challenge of developing and maintaining competition.

3.4 Specific review questions

3.4.1 To what extent did other international financial institutions engage in telecoms in the Bank's countries of operations? To what extent did the Bank cooperate with them?

Table 9 in Annex 3 displays the numbers and values of IFI contributions to telecoms projects in the Bank countries of operations signed during the evaluation period; the table compares the number and value of the Bank projects with those signed by the European Investment Bank (EIB) and the World Bank (WB)[17] in the Bank's countries of operations. The table also displays the numbers and values of some telecoms infrastructure projects signed during the evaluation period in 14 countries outside the EU and financed by private banks and funds, without IFI participation.[18]

Other IFIs (such as the Asian Development Bank and the Islamic Development Bank) did not fund telecoms projects in the Bank countries of operations during the evaluation period. However, some other banks are becoming relevant. In 2006, for instance, the Export-Import Bank of China provided €182 million to Belarus Telecommunications Network, owned by Turkcell and the government, to build a mobile network.

The analysis of figures in Table 9 in Annex 3 can be summarised as follows:

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[16] These are Azerbaijan, Belarus, Moldova, Turkmenistan and Uzbekistan. Various other countries, such as Serbia and Slovenia, still have majority state ownership despite attempted sales.

[17] The figures for a single client combine repeated projects and separate debt and equity projects but split multiple country projects between the countries (except where no such split is feasible); consequently the numbers in Table 4 in Annex 3 do not add up to the numbers of projects used in this report. The figures for the World Bank includes IFC.

[18] These numbers are World Bank estimates and are probably underestimates. They consider only infrastructure projects so they exclude some investments in Internet service providers (such as the purchase of Om.Net in FYR Macedonia by Telekom Slovenije in 2006). They rely on publicly available information which is scanty for many operators, especially if they are not publicly traded. Also, they do not record public investment in infrastructure projects because no techniques for collecting and disaggregating data for each sector are used consistently and reliably by many developing countries.

- In the evaluation period the Bank signed €519 million (for 22 projects in 17 countries); the corresponding figures for the European Investment Bank and the World Bank were €2.8 billion (for 11 projects in 10 countries) and €71 million (for 8 projects in 5 countries) respectively.
- The Bank signed €291 million (for 18 projects in 13 countries) outside the EU; the corresponding figures for the European Investment Bank and the World Bank were €1 billion million (for 4 projects in 3 countries outside the EU) and €71 million (for 8 projects in 5 countries outside the EU) respectively.
- Other, non-IFI investors committed to provide at least €6,1 billion for 17 projects in 14 countries outside the EU.[19] The Bank signed €118 million for a different collection of 14 projects in 13 of these countries (with no telecoms project in Montenegro).

The Bank and the European Investment Bank both signed projects in Poland, Russia and Slovenia; the Bank and the World Bank both signed projects in Moldova, Mongolia, Russia and Ukraine. However, in the evaluation period there were no telecoms projects in which the Bank co-financed alongside the European Investment Bank or the World Bank. One fund in which the European Investment Bank invested was subsequently the main investor in projects in Bosnia and Herzegovina, Serbia and Slovenia, in which the Bank also invested.[20]

The only case study project in which the Bank cooperated with another IFI, sharing analysis and providing financing, was in Albania, where the Bank lent €30 million and the Black Sea Trade and Development Bank provided €25 million to Albtelecom. In that case, the Bank also syndicated €45 million to commercial banks. This illustrates the Bank's usual approach in respect of its private sector projects, where it encourages the participation of commercial banks (particularly local) rather than another IFI. However, the emphasis in the knowledge economy paper on meeting the four main requirements for a knowledge economy (outlined in Box 1.3) and working to provide ICT applications to SMEs could open opportunities for more widespread collaboration, particularly with the European Investment Bank.

The projects to which the IFIs contributed included substantial private participation. For instance, the €87 million lent by European Investment Bank to a project in Kosovo to establish the second mobile telephony operator was only 30 per cent of the €290 million invested overall.

All these figures relate to new commitments made during the evaluation period. There were also very large ongoing commitments excluded from these figures – the World Bank estimates that private investment in telecoms in Russia and Turkey during the evaluation period amounted to €21.8 billion and €10.2 billion respectively.

Overall, the Bank acted as a catalyst not as a main reagent and its participation ensured that some projects happened when they might not have otherwise. However, its contribution to telecoms investment in percentage terms was very low. For instance, even outside the EU it provided only 34 per cent of the amount provided by the European Investment Bank and only 5 per cent of the amount provided by investors other than IFIs.

3.4.2 What role did the Bank play in telecoms privatisation processes?

During the evaluation period the Bank played a limited role in telecoms privatisation, participating in two such projects, mainly because most of privatisation in this sector took place before the evaluation period.

[19] Of this sum, €1.59 billion was devoted to the privatisation of Mobi63 in Serbia.
[20] Table 4 in Annex 3 does not include this investment by the European Investment Bank (amounting to €27 million) because formally the client was in the UK, not south eastern Europe. For a similar reason, this table also excludes an investment by the European Investment Bank of €225 million in a satellite company. There are no such exclusions from the figures for the Bank.

The two privatisations in which the Bank did participate were Albtelecom in Albania and Polkomtel in Poland (both case study projects). The total volume of the Albtelecom transaction was EUR 171 million and the Bank provided EUR 30 million of debt (17 per cent), while the privatisation of Polkomtel was the largest leveraged buyout ever in Poland, with financing needs of €4.5 billion (the Bank provided €200 million, or about 4.5 per cent, in quasi-equity for this transaction). During interviews with the evaluation team, the Albtelecom and Polkomtel managers stressed the importance of the Bank's participation in the privatisations, especially because of its work with the government and regulators.

Table 1 summarises the five other privatisations in the Bank's countries of operations outside the EU during the evaluation period, in which the Bank (or other IFIs) did not participate. Together these called for investments of €4.2 billion (including sums committed for network expansions as well as company purchases).[21]

Table 1: Details of privatisations outside the EU without Bank participation in the evaluation period

Privatisation project	Investor and shares acquired	Signing date	Purchase price and other investments (EUR 000)	Main market	Country
Belarus Telecommunications Network	Turkcell - 80 per cent	30-Jun-06	790,000	Mobile telephony	Belarus
Telekom Srpske (m:tel)	Telekom Srbija - 65 per cent	18-Jun-07	792,000	Mobile telephony	Bosnia and Herzegovina
United Telecom (Silknet)	Silk Road Group and TuranAlem - 90 per cent	12-May-06	102,000	Fixed telephony	Georgia
Mobi63	Telenor - 100 per cent	31-Aug-06	1,590,000	Mobile telephony	Serbia
Ukrtelecom	EPIC - 93 per cent	11-Mar-11	931,000	Fixed telephony	Ukraine

Other privatisations in the Bank's COO did not proceed, primarily for political reasons or due to unrealistic government expectations in respect of the value of the companies being privatised. For instance:

- In Kyrgyz Republic, the government announced in 2008 that it would sell a 78 per cent share in Kyrgyztelecom but subsequently rejected all offers made by six international consortia. The current government, elected in 2012, claimed that their predecessors really planned to sell the company to friends of the former president at low prices.
- In Serbia, the government announced in 2010 that it would sell a 51 per cent share in Telekom Serbija but rejected the only offer it received, from Telekom Austria, as it was €1.1 billion, €0.3 billion below the minimum asking price. Subsequently, 22 per cent of the company was distributed to citizens and the company's employees.

There have also been nationalisations in the Bank's COO, mainly because of regulatory or legal conflicts but sometimes for other reasons. For instance:

- In 2012, the Uzbek government alleged that MTS of Russia (which was the main competitor of the state-owned company) was evading taxes and failed to meet regulatory standards. The

[21] The purchase of Telekom Srpske by Telekom Srbija is regarded as a privatisation in this context, although Telekom Srbija was still state-owned despite the Serbian government's efforts to privatise it.

MTS' operating licence was cancelled and its assets seized. A court annulled the seizure but fined MTS €460 million.

– In 2012 Telekom Srbija (majority state-owned) bought 20 per cent of the company owned by OTE of Greece.

Problems of state ownership continue to be difficult to resolve. The Bank successfully assisted with one of them outside the EU (Albania), however five other privatisations have also proceeded successfully without Bank or other IFI participation.

3.4.3 What was the level of competition in the sector in 2006? What is it now?

Increased competition is usually expected to lead to falling prices.[22] Table 2 (an abbreviated version of Table 14 in Annex 5) provides the known changes in prices between 2008-11 in the Bank's countries of operations for three "price baskets" (for fixed telephony, mobile telephony and fixed broadband) considered by the International Telecommunication Union (ITU) to be appropriate to low and middle income countries. The changes are expressed in terms of changed proportions of Gross National Income (GNI) per head, so they indicate changes in affordability at least as much as changes in price.[23]

Table 2: Changes in telecoms affordability in the Bank's countries of operations between 2008-11

Country	Fixed telephony			Fixed broadband			Mobile telephony		
	Basket price as percentage of GNI per head		Change in basket price percentage of GNI per head (percentage points)	Basket price as percentage of GNI per head		Change in basket price percentage of GNI per head (percentage points)	Basket price as percentage of GNI per head		Change in basket price percentage of GNI per head (percentage points)
	2008	2011	2008-11	2008	2011	2008-11	2008	2011	2008-11
Albania	1.3	2.3	+1.0	9.2	3.5	-5.7	12.6	7.8	-4.8
Armenia	1.8	1.6	-0.2	14.0	7.9	-6.1	5.2	3.3	-1.9
Azerbaijan	0.8	0.6	-0.2	26.7	2.8	-23.9	2.2	2.0	-0.2
Belarus		0.3			3.6			1.8	
Bosnia and Herzegovina	2.4	2.5	+0.1	3.8	2.0	-1.8	4.8	4.0	-0.8
Bulgaria	2.9	2.2	-0.7	3.1	2.6	-0.5	7.2	6.3	-0.9
Croatia	1.6	1.5	-0.1	1.8	1.6	-0.2	2.5	1.3	-1.2
Estonia	1.1	1.0	-0.1	3.1	1.7	-1.4	2.2	1.9	-0.3
FYR Macedonia	3.9	3.1	-0.8	4.1	3.4	-0.7	7.4	5.0	-2.4
Georgia	1.3	1.0	-0.3	23.0	3.8	-19.2	6.8	4.6	-2.2
Hungary	2.6	2.1	-0.5	2.2	2.0	-0.2	3.0	2.6	-0.4
Kazakhstan		0.4			3.8			1.9	

[22] Levels of competition are often identified with inverted levels of concentration. This identification is sometimes inappropriate: increased concentration might result in increased, not decreased, competition, if, for example, two small complementary operators merge. Also, levels of concentration can be difficult to determine, as disaggregated market shares and profits are often published only for dominant operators.

[23] Pricing plans vary greatly. The price baskets in Table 3.2 use entry-level pricing plans from the dominant operator for the service in the country. They assume prepayment for mobile telephony and ignore special offers. Though such plans are most likely to be used by low-income customers, they are generally not the cheapest, especially when there are large differences in market shares between operators.

Country	Fixed telephony			Fixed broadband			Mobile telephony		
	Basket price as percentage of GNI per head		Change in basket price percentage of GNI per head (percentage points)	Basket price as percentage of GNI per head		Change in basket price percentage of GNI per head (percentage points)	Basket price as percentage of GNI per head		Change in basket price percentage of GNI per head (percentage points)
	2008	2011	2008-11	2008	2011	2008-11	2008	2011	2008-11
Latvia	1.1	1.0	-0.1	2.5	1.3	-1.2	1.4	1.3	-0.1
Lithuania	1.5	1.4	-0.1	1.5	1.1	-0.4	1.4	1.0	-0.4
Moldova	1.8	1.3	-0.5	18.5	8.1	-10.4	12	8.4	-3.6
Montenegro	1.9	1.4	-0.5	3.8	3.3	-0.5	2.8	2.9	+0.1
Poland	2.6	2.0	-0.6	2.5	1.9	-0.6	2.0	1.2	-0.8
Romania	2.0	1.9	-0.1	1.0	1.4	+0.4	3.5	3.4	-0.1
Russia	0.8			1.7			1.6		
Serbia	1.0	1.4	+0.4	6.4	4.2	-2.2	2.5	2.1	-0.4
Slovak Republic	1.7	1.3	-0.4	2.0	1.9	-0.1	2.9	2.7	-0.2
Slovenia	1.0	0.9	-0.1	2.1	1.7	-0.4	1.1	1.2	+0.1
Tajikistan		1.4			543.7			12.7	
Turkey		1.8			1.7			4.1	
Ukraine	1.5	1.2	-0.3	7.1	3.0	-4.1	5.2	2.6	-2.6
Uzbekistan		0.8			187.5			3.2	

Data for Kyrgyz Republic, Mongolia and Turkmenistan is not available. See Annex 5 for more information.

The following items stand out from the figures in Table 2:

– Affordability of fixed telephony increased by between 0.1 and 0.8 percentage points (or a factor between 10 per cent and 30 per cent) in almost all the countries for which there were figures except Albania and Serbia, where it decreased by 1.0 and 0.4 percentage points (or factors of 77 per cent and 40 per cent) respectively. In Albania, the Bank assisted with the privatisation of the dominant fixed telephony operator. In Serbia, the Bank supported the development of an alternative operator that did not aim to be a price leader.

– Affordability of fixed broadband increased by between 0.1 and 23.9 percentage points (or a factor between 10 per cent and 90 per cent) in almost all the countries for which there were figures except Romania, where it decreased by 0.4 percentage points (or a factor of 40 per cent) and where the Bank had no relevant project. The largest price drops occurred in Azerbaijan, Georgia and Moldova. The Bank co-financed one broadband project in Azerbaijan (Datacell, with €3 million equity) and one in Moldova (Sun Communications, with €2 million equity and €4.5 million debt). The Bank had no broadband projects in Georgia.

– Affordability of mobile telephony increased by between 0.1 and 4.8 percentage points (or a factor between 10 per cent and 80 per cent) in almost all the countries for which there were figures.[24] The Bank co-financed mobile telephony projects in Albania, Russia, Kazakhstan, Poland, Latvia and Tajikistan.

[24] The limited value of these figures is illustrated by the case of Latvia, where the decrease according to them was 0.1 percentage points (or a factor of 7 per cent) though the Bank client maintains that average per minute prices fell by 43 per cent after 2009.

- Fixed telephony was still more affordable than mobile telephony in almost all the countries for which there were figures.
- Fixed broadband was still not affordable enough in Armenia and Moldova (and in Tajikistan and Uzbekistan, if those figures are to be believed)[25] where the Bank supported the development of cable television operators that offered fixed broadband.
- Mobile telephony was still not affordable enough in Albania, Bulgaria, Moldova and Tajikistan. In Albania, the Bank supported the development of the third mobile telephony operator. In Bulgaria, Moldova and Tajikistan the Bank had no relevant project

3.4.4 What were the gaps in, and challenges to, competition? How did the Bank try to address them?

A different view of the degree of competition is provided by the detailed analysis technique that the Bank uses to assess the level of transition in telecoms. This technique is used by the Office of the Chief Economist in the annual transition reports and other documents published periodically by the Bank. It is described fully in Table M.1.4.5 of the EBRD's Transition Report 2012. It combines two scores into a single score for each country, with equal weightings, for:

- market structure, measuring competition and private sector involvement in fixed telephony and mobile telephony in terms of coverage, penetration, market shares, percentages of private ownership in incumbent operators, and the availability of number portability
- market supporting institutions and policies, evaluating the institutional and regulatory framework for promoting competition in terms of regulatory independence, dispute resolution and appeal processes, market access, competitive safeguards and interconnection capabilities.

Using this technique, the Bank scored the level of transition in telecoms in each country of operation in 2006 and 2012 on an 11-point scale from 1 to 4+ (with intervening points 1+, 2-, 2, 2+, 3-, 3, 3+, 4- and 4). In this, 1 represents little or no change from a rigid centrally planned economy and 4+ represents the standards of an industrialised market economy. The resulting scores and the difference between 2006 and 2012 scores (if any) are presented in Table 3.

[25] The rapid falls in the figures for Azerbaijan and Georgia suggest that the limited availability of the technology was leading essentially to rationing.

Table 3: Extent of telecoms transition in the Bank countries of operations in the evaluation period

Country	Score		Increase in score (scale points)
	2006	2011	2006-2011
Albania	3	3+	1
Armenia	3-	3	1
Azerbaijan	2-	2-	0
Belarus	2	2	0
Bosnia and Herzegovina	2+	2+	0
Bulgaria	4-	4-	0
Croatia	3+	4	2
Estonia	4	4	0
FYR Macedonia	3	4-	2
Georgia	3-	3-	0
Hungary	4	4	0
Kazakhstan	3	3	0
Kyrgyzstan	3	3	0
Latvia	3	3+	1
Lithuania	4-	4-	0
Moldova	3	3	0
Mongolia	3-	3	1
Montenegro	3	3+	1
Poland	4	4	0
Romania	3+	3+	0
Russia	3	3+	1
Serbia	2+	3	2
Slovak Republic	4-	4-	0
Slovenia	3	3+	1
Tajikistan	2+	2+	0
Turkey		3+	
Turkmenistan	1	2-	2
Ukraine	3-	3-	0
Uzbekistan	2	2	0

The analyses in Table 3 illustrate that during the evaluation period:

– Four countries (Croatia, FYR Macedonia, Serbia and Turkmenistan) made substantial progress in telecoms transition: they rose by two points. The Bank signed €26 million for telecoms projects in those countries. There were no EIB or the World Bank/IFC projects in these countries.

– Seven countries (Albania, Armenia, Latvia, Mongolia, Montenegro, Russia and Slovenia) made some progress in telecoms transition – they rose by one point. The Bank signed €219 million for telecoms projects in those countries; the corresponding figures for the European Investment Bank and the World Bank/IFC were €100 million and €55 million respectively.

- 17 countries did not make any progress in telecoms transition. The Bank signed €274 million for telecoms projects in those countries; the corresponding figures for the European Investment Bank and the World Bank/IFC were both €2.58 billion and €16 million respectively.
- In 2012 six countries (Azerbaijan, Belarus, Bosnia and Herzegovina, Tajikistan, Turkmenistan and Uzbekistan) were at level 2-, 2 or 2+ for telecoms transition; one had made clear progress (Turkmenistan), however from a very low base of 1. The main transition gaps in these countries related to the lacking or inefficient regulatory regime and the existence of a state monopoly in different telecoms subsectors. The Bank signed to provide €39 million for telecoms projects in those countries.[26] There were no EIB or the World Bank/IFC projects in these countries.
- 15 countries (Albania, Armenia, Georgia, Kazakhstan, Kyrgyz Republic, Latvia, Moldova, Mongolia, Montenegro, Romania, Russia, Serbia, Slovenia, Turkey and Ukraine) were at level 3-, 3 or 3+ for telecoms transition; eight had made clear progress. The Bank signed €264 million for telecoms projects in those countries; the corresponding figures for the European Investment Bank and the World Bank/IFC were €1.05 billion and €71 million respectively.
- Eight countries were at level 4- or 4 for telecoms transition. The Bank signed €216 million for telecoms projects in those countries[27]; the corresponding figure for the European Investment Bank was €1.63 billion. There were no World Bank/IFC projects in these countries.

These figures suggest that the Bank directed some of its funds to countries that it judged to be either capable of or in need of telecoms transition; more to the point, other IFIs did not direct their funds to those countries. The Bank attempted to find and support promising, albeit relatively weak, alternative operators in those countries where the telecoms transition challenges remained the largest. For example, the Bank had projects in Moldova, Serbia and Ukraine, as well as in each of the six countries at level 2-, 2 or 2+. The Bank's success was perhaps limited because all six countries at level 2-, 2 or 2 (except for Bosnia and Herzegovina) lack adequate regulatory and legal frameworks and have governments that are not interested in changing matters in their telecoms sector by accepting technical assistance from IFIs.[28]

However, the Bank directed much of its funds to countries that had already made much progress. Its investments in telecoms were largely opportunistic – the largest of them followed the demand from strong sponsors, as demonstrated by the case study projects Albtelecom, Polkomtel and Tele2.

Alternative indicators to the above have been used in Annex 5 (particularly table 10, 11 and 12) to illustrate differences in the telecoms sector development in different counties, including case study countries, selected EU countries and SEMED countries. They provide measures of ICT development (ITU's ICT development index) in the broader context of human development, corruption perceptions, press freedom, judicial independence and global competitiveness.

[26] One of the projects in Bosnia and Herzegovina was cancelled before disbursement. The figures presented in this report nonetheless include the €2 million allocated to that project among the totals.
[27] Of this sum €200 million was devoted to the privatisation of Polkomtel in Poland.
[28] The Transition Report 2012 assessed the transition gap in institutions supporting the telecommunication market as "large" in five (Azerbaijan, Belarus, Tajikistan, Turkmenistan and Uzbekistan) out of the six countries rated overall 2-, 2 0r 2+. Azerbaijan might be an exception to the belief that the governments of these countries do not welcome technical assistance from IFIs in the telecoms sector, as it accepted a TC managed by the Bank during the evaluation period.

3.4.5 What are the main challenges to increasing competition in telecoms in the Bank's countries of operations?

Since the adoption of the 1999 sector policy, experience has confirmed that privatisation is only one step in forming a well-functioning market, particularly in Latvia and Moldova. After privatisation, an incumbent operator typically has significant market power and sells wholesale services to its retail competitors which have very much smaller networks. Without effective monitoring and enforcement of regulations, the incumbent operator might indulge in anti-competitive practices by:

- squeezing the margins of retail competitors by raising its wholesale prices unjustifiably or lowering its retail prices unjustifiably
- letting its retail operations buy its wholesale services on terms unavailable to retail competitors
- letting its retail operations exchange information with its wholesale operations in ways unavailable to retail competitors
- providing incentives to wholesale employees that depend on retail performance
- exploiting the corporate connection between its retail services and its wholesale services in branding, marketing or sales.

Companies that have significant market power and that provide both communications and content (such as large cable television operators in some countries) might also indulge in such anti-competitive practices. In particular, they might violate network neutrality by not letting their competitors have the quality of service that they provide on their networks to their own content.

Even without overtly anti-competitive practices, increasing competition is challenging in many countries for at least the following reasons (some of which were recognised in the 1999 sector policy):

- Operators with strong cash flows can play on the weakness of alternative operators and cut prices for some time. This is particularly so when the alternative operators have high leverage, perhaps resulting from having been acquired.
- As mentioned in Serbia, wholesale remedies such as Local Loop Unbundling (LLU) intended to encourage competition in providing local loop services can be complicated to implement, monitor and enforce effectively. They also apply only to the incumbent fixed telephony operator, though the incumbent fixed television operator might be equally dominant in some towns.
- Land ownership might be complicated or difficult to ascertain, or municipal authorities might not apply planning rules impartially when aerial cables, radio towers or road trenches are to be approved. As noted in Moldova, alternative operators are then disadvantaged, especially if they do not have rights to occupy the ducts and other facilities of incumbent operators at fair and non-discriminatory prices.
- As suggested in Albania, alternative operators can find difficulty in getting the regulator to appreciate their points of view because they are too small to have political influence or to have many employees dealing with regulatory affairs.
- Developing a strong competitor can require the acquisition of several companies. This can be infeasible because the individual companies are too expensive or the combined company would have too large a share of another market. Even if the companies are acquired, integrating them successfully needs management attention and skill.

– Consumers might not have enough knowledge or skill to choose between operators in ways that exploit and thereby encourage, competition. For instance, the tariffs might be too complicated to understand fully, the quality of services might be improperly documented or advertised, or the small print in contracts might prevent transfers to other operators for several years.

Many of these difficulties can be diminished by effective regulatory action. However, there are other difficulties arising not from the operations of the regulator but from the policies of the government. In particular:

– Policies might not require tariff rebalancing, which is likely to be unpopular (Moldova is an example). However, unless fixed telephony tariffs are balanced, alternative operators have few incentives to compete with incumbent operators for local calls. Indeed, even if tariffs are balanced, alternative operators might not compete for local calls, because without extensive networks of their own they need to pay call origination or termination charges. Without effective implementations of wholesale remedies such as carrier selection, tariff rebalancing might make local calls more expensive without increasing competition.

– Policies might not introduce number portability, which is claimed to be expensive (in Russia, for example), yet customers can be reluctant to transfer between operators if their numbers are not portable. Indeed, even if numbers are portable, consumers might be reluctant to transfer from the operators serving their main contacts because inter-network calls are more expensive than intra-network calls. Without requirements for cost-based mobile termination rates, number portability might attract consumers to large operators and increase market concentration instead of increasing competition.

– Policies might relax regulations applied to incumbent operators with the intention of encouraging investment. For instance, "regulatory holidays" have been suggested (in Poland, for example) to support monopoly investments in optical fibre broadband on the grounds that the business cases are too weak to justify multiple investments. Arrangements for open access to facilities by all operators, and for careful regulation of the facilities, are more likely to increase competition than "regulatory holidays".

– Policies might encourage competition in providing networks not just in providing services. The motives are laudable - three mobile network operators (in Latvia, for example) compete more vigorously than two. However, requiring networks to be distinct might discourage investments or lead to business failures - network costs can make even three operators difficult to sustain in some countries. Allowing operators to share networks, especially radio towers, can reduce costs and improve coverage while preserving competition in services.

– Policies might limit the number of licences issued and thereby limit competition. The intention might be to protect consumers against business failures though this is hard to maintain when the potential market entrants are well funded and have long-term views.

– Policies might restrict the availability of spectrum in various ways. One widespread restriction keeps large spectrum holdings for the armed forces, which have few incentives to relinquish them and which occupy them very wastefully.[29] A further restriction precludes the approval of novel equipment for exploiting unused spectrum (over short ranges, in "white spaces" or by

[29] Wasteful use might be better than unfair use: in Jordan the armed forces wanted to use their spectrum holdings to set up a mobile network that would be free for the families of their personnel and thereby compete unfairly with existing mobile networks.

real-time adaptation) because of potential interference. Failing to switch from analogue television to digital television results in another restriction and it prevents the release of spectrum holdings that are highly appropriate to broadband. In all these ways, restricting the availability of spectrum can impede market access and thereby impede competition.

In general, policies aiming to increase competition must be coordinated and, in some cases, offset by other policies. Increasing competition is not, after all, an objective in its own right but the means to achieving the objective of increasing consumer benefit.

3.4.6 Do the evaluation findings provide any guidance on the elements of a new policy?

A replacement for the 1999 sector policy might usefully put forward approaches to various other recurrent problems besides those mentioned in Section 3.4.5. For instance:

- As noted during interviews in all case study countries except for Latvia, long-standing uncertainties about government policy, laws and regulations (such as whether and when to rebalance tariffs) halt or distort investment. Through its future projects, the Bank should consider aiming to remove such uncertainties.
- It has been highlighted in almost all case study countries that putting appropriate laws and regulations in place is only a start to developing the regulatory environment. In the absence of fast and firm enforcement by the regulator (and, where necessary, the courts), new market entrants will be outflanked by established market participants. Bank operations could support the development of relevant skills through technical cooperation.
- It has also been stressed during field interviews conducted under this evaluation that some large incumbent operators (mainly from Western Europe) have affiliates in several of the Bank's countries of operations. These companies have extensive experience in using regulation to their advantage. While welcoming the management and technology that they bring, Bank projects should recognise the need for regulators to develop countervailing skills (such as through multiple-country technical cooperation).

The 1999 sector policy forms a general framework for selecting telecoms projects. The country strategies should provide focus and relate the 1999 sector policy to the needs of the countries. In practice however, some country strategies rely on project pipelines. However, in such case these country strategies might not reflect all or real needs of the country, because the pipelines tend to be constructed from immediate market opportunities, not long-term possibilities. As ICT, including telecoms, is central to well-functioning market economies, country strategies should consider ICT opportunities and risks even if the pipelines have no ICT projects at the time when they are prepared.

4. Efficiency

4.1 Summary

The efficiency of Bank telecoms operations is the extent to which they obtain their results (especially their financial results) as cost-effectively as possible. In this evaluation it is considered in terms of the financial performance of telecoms projects and the Bank handling of telecoms projects.

The evaluation reaches the conclusions that:

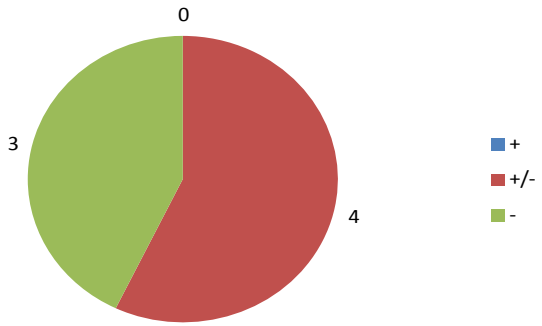
– The financial performance of telecoms projects can be rated as "unsatisfactory". It is limited by excessively optimistic projections, because competition or regulation was stronger than expected or the financial crisis affected revenues.

– The Bank handling of telecoms projects can be rated as "satisfactory". It is limited by the low level of Bank involvement in strategic decisions about some projects and shortcomings in due diligence in others.

The efficiency of Bank ICT operations overall is assessed as "marginal".

4.2 Financial performance of telecoms projects

Figure 10: Rating of case study projects for financial performance



The five (out of seven) case study projects that started before 2011 underperformed financially. In 2012:

– The EBITDA of Bitė, a mobile network operator in Latvia, was 50 per cent of that projected at the time of closing the financing transaction, and the estimated value of the Bank investment was 50 per cent of its cost. One cause was the fall in prices due to competition and the regulated reduction in mobile termination rates.[30] In addition, the company was perhaps still recovering from being misled in its projections by its large number of subscribers. In fact, many subscribers were inactive and needed to be replaced by others who were more willing to make calls.

[30] The EBITDA and revenue of other mobile networks operators involved in case study projects, in Poland and Russia, also suffered slight declines in 2011-12 under competitive pressure. However, their Bank financing transactions took place in 2011, so there can only be preliminary evaluations of their performance.

- The EBITDA of Sun Communications, a fixed television operator in Moldova, was 30 per cent of that projected at the time of closing the financing transaction, and the estimated value of the Bank investment was 50 per cent of its cost. Much of the shortfall can be traced to the failure to acquire large cable television operators because the Anti-Monopoly Commission objected and the prices were too high and an IP telephony operator because the technology was inadequate.
- The EBITDA of Orion, a fixed broadband operator in Serbia, was 15 per cent of that projected, affecting its equity value and making the Bank's optional conversion from loan to equity unattractive.[31] Much of the shortfall can be also traced in this case to the failure to make substantial acquisitions because the prices were too high.

The fall in mobile telephony prices was also a cause of the poor financial performance of Albtelecom in Albania. Despite capturing twice as many mobile telephony subscribers as projected, Albtelecom did not achieve the projected revenues.[32] In addition, Albtelecom performed poorly in fixed telephony where it failed to capture more than three-quarters of the projected number of subscribers or to keep subscribers after capture. Indeed, though the company had increased its number of fixed telephony subscribers greatly before privatisation, it achieved only a modest increase after privatisation which was then offset by a greater decrease.[33]

The financial performance of Braeside Investments in Ukraine suffered mainly because the country had a severe economic and political crisis, which resulted in the devaluation of the currency. However, another contributing factor was the failure of the company to expand, either through acquisition or entry into new markets.

Braeside's failure to expand into new markets might have resulted from a failure to obtain the relevant licences, in which case it reflects a failure to appreciate the likely regulatory policies or environment when setting up the project.

Detailed information about the financial performance of the case study projects can be complemented by aggregate financial information about the ICT team projects overall. For all such completed and active debt projects signed during the evaluation period, the net IRR amounts to 3.0 per cent after adjustment for provisions.[34]

The figure before adjustment for provisions is 5.0 per cent; this is higher than the figure of 4.4 per cent given in the 2006 Sector Evaluation for ICT team projects signed in the period 1991-2005. Of the 79 ICT team projects (if extensions or debt/equity projects are counted separately) signed during the evaluation period, 39 involve equity.[35] The net IRR for all equity projects is -16.7 per cent.[36]

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[31] The Bank financing was largely in the form of a convertible loan, which on conversion was to amount to somewhere between 25 and 30 per cent of the company's equity. However due to Orion's financial situation this option has not been exercised while the interest on the loan had been deferred.

[32] When the mobile telephony operation in Albania is well established the client there might well seek to reduce its number of subscribers and concentrate on those offering higher revenues. The client in Latvia is pursuing a similar policy to good effect.

[33] Failure to increase this number is probably not due wholly to the substitution of mobile telephony for fixed telephony - other operators in Albania increased their subscriber numbers and fixed telephony penetration in Albania remains lower than elsewhere in south eastern Europe.

[34] The IRR on debt operations takes account of interest receipts and fees, direct costs, capital disbursements and repayments. For more complex loans with embedded derivatives, it also takes account of gains and losses at fair value. Debt operations have been adjusted for specific and general loan loss provisions, whether applied to the Bank's profit and loss account or to the Loan Loss Reserve.

[35] Among these are 17 media projects that are not ICT projects in the sense understood here. Moreover, in this report projects are counted by separating the individual national components in regional projects and separating debt and equity components in mixed (debt and equity) projects. If these components are not counted as separate, there are 47 projects, 22 of which involve equity.

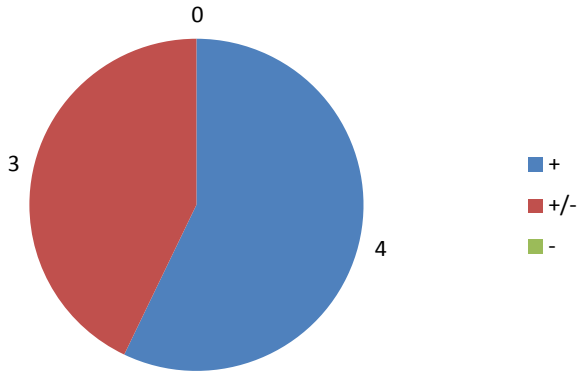
The Bank's profit and loss statements show that the average return on debt assets for ICT team projects has been slightly below the overall Bank average. Returns on equity assets, both for the ICT team projects and for Bank projects in general, have varied greatly over the last two years. However, it indicates the improvement in the return from the ICT projects in 2011, which is even more remarkable given a substantial deterioration in returns from the Bank-wide equity projects. The variation is shown in Table 4 for the returns on average total assets, the returns on average debt assets and the returns on average equity assets.[37]

Table 4: Results from Bank profit and loss statements (2010-11)

Year	Return on average total assets (per cent)		Return on average debt assets (per cent)		Return on average equity assets (per cent)	
	ICT team	Bank-wide	ICT team	Bank-wide	ICT team	Bank-wide
2010	-2.2	7.4	2.8	3.9	-11	17.7
2011	3.9	0.5	2.7	3.1	5.3	-7.1

4.3 Bank handling of telecoms projects

Figure 11: Rating of case study projects for Bank handling



Key findings in respect of Bank handling during the evaluation of the case study projects were as follows:

– Feedback from clients and other stakeholders on the Bank's work has been positive and in some cases highly positive. The management of Orion in Serbia was particularly complimentary about the Bank's constructive role in resolving the dispute among the shareholders, while regulators in Albania stressed the importance of the Bank's contribution to the establishment of the new legal and regulatory regime and to the training of regulators.

– Financial and legal due diligence of the telecoms projects has been mostly adequate but in some cases it could have been better. For instance, in the Sun Communications project in Moldova, the client provided optimistic assumptions about acquiring companies. In its scrutiny of the assumptions, the Bank focused on telecoms regulations and paid less attention to

[36] The IRR on equity operations takes account of realised gains and dividends, assumed equity cost of funds of around 5.0 per cent until 2009 and 2.5 per cent thereafter, direct costs, capital flows (equity subscriptions and repayments), impairment losses and unrealised gains and losses based on the fair value estimates by the Bank at the end of 2011.
[37] The return on average total assets is the contribution after debt-specific impairment and fair value movements divided by the average total operating assets. The return on average debt assets is the contribution after debt-specific impairment and fair value movements divided by the average debt operating assets.

competition policies. However, acquisitions of companies were prevented by an unforeseen decision of the Anti-Monopoly Commission. Due diligence might have questioned the appropriateness and feasibility of trying to increase the market share of the client.

- Legal due diligence on the shareholding structure of smaller alternative operators could have been more thorough. For example, an ownership dispute in an investee company in the Orion project in Serbia occupied the management for a year and a half due to inadequate legal documentation. The Bank played an active role in resolving the stalemate but better legal due diligence might have disclosed the gaps in the legal documentation or questioned the suitability and compatibility of the partners.
- The Bank has not always used its ownership position pro-actively. For instance, in the Bitė project in Latvia, the Bank had little active involvement with the client when its capital structure was under review, despite owning more than 10 per cent of its shares. In the Braeside Investment in Ukraine, the Bank did not react or object when the client, a cable television operator, proposed to abandon plans for offering fixed telephony which was one of the two main transition impact objectives of the project.

Monitoring reports for stand-alone telecoms projects are generally of good quality with all financial details and other relevant information, though in some cases there are parts (for example, TIMS) which are out of date. Reporting for projects processed under various facilities is much less thorough but generally in accordance with the facility requirements.

5. Transition impact and sustainability

5.1 Summary

The transition impact and sustainability of Bank telecoms operations is the extent to which they foster transition from a centrally planned to a well-functioning market economy.

The evaluation reaches the following conclusions:

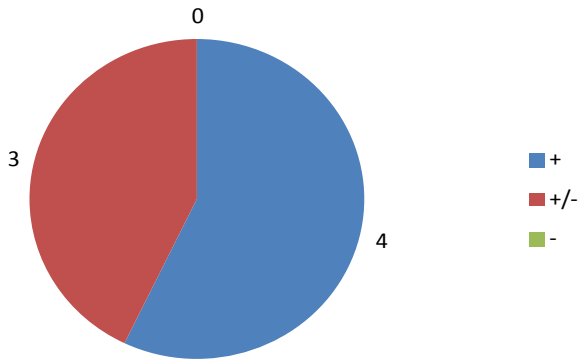
– The transition impact can be rated as “satisfactory”. It is limited by failures by the Bank, and/or some Bank clients, to achieve benchmarks related to increased competition or market expansion.

– The sustainability of project outcomes can be rated as “good”. It is limited by the absence of links between the projects and universal service policies.

Overall the transition impact and sustainability of Bank telecoms operations is assessed as “satisfactory”.

5.2 Transition impact

Figure 12: Rating of case study projects for transition impact



The transition impact ratings are based on the extent to which the projects reached the transition benchmarks agreed at project approval stage. The benchmarks relate to seven indicators (shown in figure 13 below) but typically projects do not set benchmarks for all seven indicators. Moreover, some of the benchmarks (in Albania, for example) are rather undemanding. The indicators and the numbers of projects with particular ratings for those indicators are shown in Figure 13.

Figure 13: Rating of case study projects for individual transition impact indicators

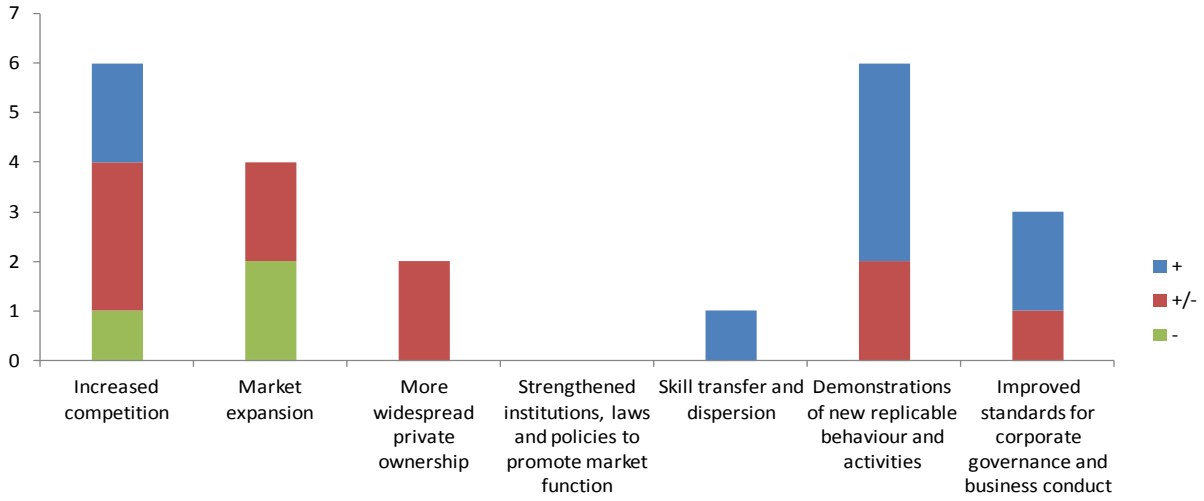
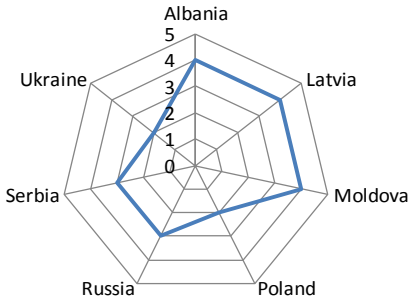


Figure 14 shows how many of the transition impact indicators are used by each of the seven case study projects, and thereby provides an indication of how well individual projects use the indicators. All the projects could be seen as using two, three or four of the transition impact indicators.

Figure 14: Numbers of transition impact indicators used by particular case study projects



The extent to which the case study projects achieved their transition impact objectives by reaching their most significant benchmarks is summarised below.

5.2.1 Increased competition

Service prices and quality improved during the evaluation period, as demonstrated in Annexes 6-11 (on the case study countries) and Annex 5 (on international comparisons). One cause of this was increased competition.

Increased competition was a transition impact objective for six of the seven case study projects and for 11 of the 17 policy review projects. It was fully achieved in two case study projects and partly achieved in two others. Certainly by supporting alternative operators the Bank contributed to increased competition but this contribution was limited by such factors as:

– lack of balance in fixed telephony tariffs (in Moldova and Serbia)

– lack of regulation of mobile termination rates (in Albania)

- the ability of incumbent operators to fight back by cutting prices (in Latvia)
- the complications in using physical network remedies to overcome the dominance of incumbent operators (in Serbia)
- lack of influence on national laws and policies (in Russia)
- the inability to acquire companies (in Moldova, Serbia and Ukraine)
- the costs of being the third mobile network operator in a small country (in Albania and Latvia).

5.2.2 Market expansion

Market expansion happens when the number of potential customers for a service rises, typically because of network extensions or marketing changes which might also, of course, be driven by increased competition. Therefore the rising penetration demonstrated in Annexes 6-11 (on the case study countries) and Annex 5 (on international comparisons) is evidence of market expansion in most of the Bank's countries of operations.

Market expansion was a transition impact objective for four of the seven case study projects (and for 14 of the 17 policy review projects). It was partly achieved in two case study projects. It was limited by such factors as:

- failing to sufficiently increase the number of fixed telephony subscribers and to keep new or existing subscribers (in Albania)
- failing to consolidate the cable television industry and to establish a strong base in fixed telephony (in Moldova)
- holding only spectrum licences restricted to 2G services, typically in regions having low incomes and low population densities (in Russia)
- abandoning plans to introduce fixed telephony using the cable television network (in Ukraine).

5.2.3 More widespread private ownership

More widespread private ownership was not achieved. Although private ownership increased as the companies financed by the Bank moved from state control to private control, private ownership did not become more widespread because of this.

Two case study projects (Albtelecom and Polkomtel) had the transition objective of "the achievement of widespread private ownership". However, both companies were acquired by single strategic investors. These strategic investors were two foreign companies in one case and a private individual in the other case so, when seen in isolation, the privatisations did increase private ownership but they did not make it more widespread.

Having single strong strategic investors might be more desirable than many passive shareholders. The Bank knew that both companies were to be privatise through a sale to a strategic investor, rather than an IPO (or stock exchange flotation), therefore their transition objectives were not adequately formulated in EvD's opinion.

5.2.4 Demonstrations of new replicable behaviour and activities

The most common transition impact objective in ICT projects, for demonstrations of new replicable behaviour and activities, was present in six of the seven case study projects (and in 14 of the 17 Policy Review Projects). It usually involved demonstrating new products or processes, successful restructuring and new ways of financing for which benchmarks were set for four, two and two case study projects respectively.

The objective of demonstrating new replicable behaviour and activities was often achieved by the case study projects, in the sense that the benchmarks were reached.[38] However, to achieve a strong demonstration effect, proper documentation and publicity are often necessary. Most of the Bank's telecoms projects were not as well documented and publicised as they could have been. This is a broader issue within the EBRD, not only applicable to the telecoms projects.

5.2.5 Improved standards for corporate governance and business conduct

Improved standards for corporate governance and business conduct were often achieved by the case study projects, especially when they concerned governance structure, financial reporting, and so on. However, improved standards could also be required in the treatment of customers and employees. Although such improvements were not set as formal objectives under telecoms projects, remarkable innovations and improvements have been achieved in some cases. In particular, Bitė in Latvia included benchmarks for being perceived favourably as an employer and as an operator, and the client had a particularly forward-looking approach to developing employee satisfaction, which it expected would enhance customer satisfaction and ultimately the company's commercial success. Such an approach, increasingly applied by companies in the most developed countries, is still rare in the Bank's COO and would deserve better publicity to amplify its demonstration effect.

5.3 Sustainability of project outcomes

The sustainability of the outcomes of telecoms projects has three aspects: economic, social and environmental. The economic aspect is covered by the financial performance indicators since the outcomes of a project are unlikely to endure if the project or the company is not financially viable.

The social aspect usually relates to the universality (availability, accessibility and affordability) of services. Having universal service has long been an important policy for fixed telephony in many countries. Yet the ICT projects evaluated for this report did not mention it. The unwillingness of governments to require tariff rebalancing could be mitigated if there were detailed affordability analyses and proposals for low usage tariffs. This could be a useful topic for future technical cooperation between the Bank and governments in the countries of operations. A further useful topic, for countries at a more advanced stage of transition, would be the appropriate means of ensuring the availability and take-up of broadband, in line with the needs of the knowledge economy and the growing expectation that there should be universal service for it, too.

The environmental aspect is covered by the environmental performance and change indicators. However, these are rarely examined carefully for ICT projects and the ratings assigned for them by different projects are not obviously consistent with each other. In fact, ICT projects have various environmental implications. As noted in the 1999 sector policy, for electronic communications projects these implications usually arise in the planning process where the Bank requires clients to follow transparent consultative practices and

[38] The exceptions were typically on their way to being achieved.

local authority rules (for deciding on the use of aerial cables or the location of radio towers, for example). Reviews before the approval of projects should determine what undertakings clients are making, and reviews after approval should monitor adherence to those undertakings.

5.4 Specific review questions

5.4.1 To what extent did the Bank technical cooperation projects try to address the transition gaps?

ICT team projects did not formally incorporate any technical assistance. However, in the evaluation period there were 16 TC projects in 12 countries aiming to improve the telecoms regulatory and legal environment. These were implemented under the Bank's LTP by a dedicated Legal Transition Team (LTT). This was in line with the ICT team approach which years ago decided to delegate policy dialogue to the LTT, aiming at regulatory and legal improvement and mainly directed at the countries where Bank financing is provided.

The effectiveness of this arrangement is discussed in Section 5.4.3. It certainly enabled the ICT team to concentrate on identifying and closing banking transactions. However, due to this set up, some opportunities to undertake useful TCs other than in legal or regulatory areas, might have been missed (for example, TCs aiming at the improvement of corporate governance of the investee companies or the borrowers).

The LTP divides its activities into the following four areas: (i) assessment of legal and regulatory environment; (ii) standards setting; (iii) support of legal reforms and (iv) outreach. The LTP's achievements under the third key activity area are described in the next section while those for the first two areas were as follows:

- In December 2008 the LTP completed and published an extensive review, Comparative Assessment of the Telecommunications Sector in the Transition Economies. The resulting findings have provided direction for further telecoms law reforms and the Bank financing.
- To set standards, the LTP developed core principles for the telecoms sector.
- In the Bank's countries of operations outside the EU, the LTP promoted transparent practices, including principles developed by the World Trade Organisation (WTO) that have been influential in unifying practices and operational protocols worldwide.
- The LTP advocated regulatory uniformity, particularly in the early transition countries such as Mongolia and Kyrgyz Republic.

5.4.2 Can Bank engagement be associated with any specific policy, legal, institutional or regulatory reform?

The LTP activities in the telecoms sector were intended principally to support legal reform. The LTP usually applied an integrated approach, engaging in policy advice and the drafting of legislation and regulatory procedures, as well as the training of practitioners. Moreover, the LTP also supported the approval of legislation, in some cases effectively explaining the implications of the proposed new regime directly to the legislators. This proved to be particularly important for enactment into law.

More details can be gleaned from the telecoms sector transition ratings in Table 2.1. In these ratings, market supporting institutions and policies, especially the regulatory and legal environment, have a 50 per cent weighting. Out of 12 countries where there were TCs aiming to improve the telecoms regulatory and

legal environment in the evaluation period, five increased their ratings (Albania, Armenia, Mongolia, Montenegro, Serbia) but six[39] did not make any progress (Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Tajikistan) despite in some cases having multiple LTP projects, including three in Kazakhstan and two in Kyrgyz Republic. Furthermore, according to the Transition Report 2012, "large" transition gaps remain in the market supporting institutions in five countries. In two of these there were relevant TCs.

In addition, six countries where there were no TCs aiming to improve the telecoms regulatory and legal environment made progress in sector transition. These were mainly EU members (Slovenia, Latvia) or those aspiring to EU membership (Croatia, FYR Macedonia). This suggests that the TCs helped with transition but were most helpful in the countries which were compelled to adopt EU legislation and regulatory standards due to their membership aspirations (Albania, Montenegro and Serbia).

5.4.3 How effectively linked were technical cooperation and investment activities?

According to both the ICT team and the LTT, the TC projects were closely coordinated with the Bank investment activities. The teams have regular joint meetings, while the LTT's telecoms sector specialist usually accompanies the ICT team bankers on their client visits during the initial stage of the project to identify legal and regulatory gaps. Improvements in legal and/or regulatory environment are often prerequisite for the feasibility of banking projects, therefore the LTT's TC projects usually precede them or try to anticipate them as legal projects usually take long time. In the evaluation period the ICT team signed four telecoms projects in Armenia, one in Albania one in Mongolia, and four in Serbia. These were the countries where the LTT implemented their telecoms TCs and which subsequently made transition progress in the telecoms sector.

The evaluation department evaluated the Legal Transition Programme in June 2012. The telecoms regulatory assistance component of the LTP was rated as "highly successful". Please refer to the Legal Transition Programme Review (PE11-537) for more details.

[39] Among 12 countries where telecoms TCs were implemented there was also a TC in Kosovo, which however has not been rated in the Bank's Transition Reports and therefore the impact of this TC cannot be assessed here.

6. Findings and recommendations

In the process of the case study projects evaluations and the overall assessment of the Bank's performance in the telecoms sector, the evaluation team identified a number of issues and considerations, which might be useful when designing the Bank's new ICT operations policy or when preparing or executing telecoms projects.

A full set of such findings and considerations is presented at the end of each case study evaluation in Annexes 6 to 11. The full context of each case from which each finding or consideration has been derived are also presented in these annexes. The lists below provides extracts of the most important findings and considerations stemming from the case study evaluations and overall analysis of the Bank's performance in the telecoms sector.

6.1 Key findings

– **Relative weakness of alternative operators in the Bank's COO**

  Alternative operators can be energetic but they often lack economies of scale. As the Bank's projects in Serbia and Moldova prove, actions to consolidate alternative operators can bring about economies of scale and thereby stimulate competition and have strong transition impact. However, attention should be paid to avoid strengthening the positions of operators already dominant in other markets (such as cable television) while supporting their broadband expansion.

– **The Bank's role in privatisation**

  There are still large telecoms companies directly or indirectly owned by the state, even in some advanced transition countries. The EBRD may still play a role in accelerating or enabling privatisation as strategic investors still prefer to co-invest in this sensitive sector alongside institutions providing additional political comfort, such as the Bank.

– **Need for a shift in the focus of TC projects**.

  TC projects for regulatory and legal strengthening (usually run alongside telecoms banking projects by the LTP) are generally well regarded by the industry practitioners. However, market participants commented that the staff of regulators and judges in commercial courts would benefit from a better acquaintance with practical solutions to day-to-day regulatory problems applied elsewhere, especially in respect of strengthening regulation enforcement.

– **Impact of rapid evolution in the sector on the Bank's expectations**

  Albania, like most EBRD countries of operations, historically had low fixed telephony penetration rates. However, after the privatisation of the incumbent (Albtelecom), the expected rise in fixed telephony connections did not materialise as demand for fixed telephony was replaced by demand for mobile telephony. As a result, the desired fall in employees per fixed line (set as a transition impact benchmark) became difficult to achieve.

– **Legal due diligence in the sector**

  Sectors such as ICT have their own specific laws and regulations. However, there are also general laws and regulations that apply to all sectors. For instance, there are specific

regulations in many countries governing telecoms companies that have become dominant in their markets but stopping companies from becoming dominant is a matter for general competition law. In the case of the Sun Communications project in Moldova, the Bank worked closely with the regulator but the decision preventing the client from acquiring new companies (the project's main objective) came from the Anti-Monopoly Commission.

– **Changing patterns of consumer behaviour**

As the Bitė investment in Latvia illustrated, consumers nowadays often have more than one mobile phone or SIM card. Operators assign telephone numbers for all of them and add to their numbers of subscribers. Consequently, an operator having many subscribers (especially prepaid) can have very low or no revenues and therefore its real value can be much lower than it seems based on subscriber numbers. This is an important consideration for due diligence.

– **Risk management**

Alternative cable television companies and internet service providers operate in highly competitive markets and remain exposed to many acute risks such as changes in technology and regulation. As the Bank's investments in Sun Communications or Bitė demonstrate, straight equity financing can be very vulnerable and may result in substantial loss. Other types of financing (such as quasi-equity with a minimum return) need to be considered more often for such projects.

– **Impact of number portability regulation on competition**

Unrestricted number portability is regarded as critical for the promotion of competition in mobile telephony. However, as the experience of Tele2 in Russia demonstrates, in regions where mobile penetration is low, operators can increase competition and expand the market without number portability. In such regions, number portability might lead competing operators to pursue the same high-usage customers instead of expanding the market. Moreover, in all regions, number portability might increase concentration instead competition if termination rates are so high that customers are attracted to the same networks as their frequent contacts. In such cases the reduction of termination rates should precede or accompany the introduction of number portability.

6.2 Considerations for a new policy

– **Expansion of broadband penetration**

As demonstrated during the Polkomtel privatisation and also highlighted recent projects, the main development in telecoms over the next few years will be the growth of high speed broadband access (including 4G), using wireline or wireless technologies. Penetration will be increased in rural and remote areas by using various distinctive funding schemes, such as minimum subsidy auctions and market arrangements such as municipal open access. The Bank should consider ways to better emphasise the opportunities for financing broadband infrastructure with both operators and local authorities, particularly those which strengthen alternative operators (through consolidation, for example), in its new sector policy.

– **Incorporating the promotion of e-business or e-government as part of the Bank's policies for different sectors and strategies for selected countries**.

Relatively low internet use in the Bank's COO remains a key limiting factor for sector growth. Supply-side investment in ICT infrastructure needs to be supported by demand-side use. However, as demonstrated during the Sun Communications project in Moldova, broadband availability exceeds broadband take-up, for businesses as well as households, in some of the Bank's COO. More vigorous promotion of e-business and e-government by the Bank's projects across different sectors could help facilitate the telecoms sector development. The links between the new telecoms policy and other sector policies should be considered, particularly in respect of the SME and MEI sectors, as well as country strategies for ETCs. Integration of e-business and e-government into different sector policies and country strategies could follow (to a certain extent) the example of energy efficiency, which is now well integrated into the Bank's projects across all sectors.

– **Financing network development in low population density regions.**

As the Tele2 experience in Russia demonstrates, regional operations outside the capital can be successful in large countries if they can keep their costs low enough to take account of the low population densities and low incomes in those regions. To do so, telecoms operators might need to use terrestrial or satellite wireless technologies instead of wireline ones. Such Bank projects would benefit regional development and could have strong transition impact and additionality.

– **Participation in major privatisations**

There are still several large telecoms companies in the Bank's COO which are state owned and which might be privatised in the future. The Bank might play an important role in guiding partner countries and individual clients through privatisation, including ensuring effectiveness of the regulator and providing co-financing to strategic investors.

– **Refocusing telecoms TCs**.

In terms of policy dialogue and further technical cooperation, the Bank should continue to support the staff of regulators and judges (through the LTP, for example), but focus more on the effective monitoring of compliance and enforcement of regulations than on new legislation. Topics for the staff of the regulator might include spectrum auction design, cost modelling and scrutiny of local loop unbundling and number portability processes. Topics for judges in commercial courts might include the consequences of delaying the execution of regulatory decisions.

– **Regular policy updates.**

The ICT sector, including telecoms, is subject to particularly fast changes in technology, consumer preferences and market patterns and therefore the Bank's operating priorities for such a sector may become obsolete within years or even months. To ensure it stays abreast with the changing environment, the Bank should consider introducing regular (annual or semi-annual) reviews of its ICT operations policy.

6.3 Considerations for project design and execution

– **Setting transition benchmarks**

When setting transition benchmarks for telecoms projects, the Bank should take account of shifts in demand experienced in the telecoms markets and in consumer preferences

elsewhere. In particular, it should note the possibility of mobile telephony substituting for fixed telephony, as well as the expansion of mobile broadband.

– **Legal due diligence**

In addition to analysing telecom-specific regulations, due attention should be paid to general laws (particularly anti-monopoly and competition) which can have profound impact on telecoms sector projects.

– **Taking account of regulatory side effects**

When supporting changes in the regulatory environment, the Bank should take account of the side effects of regulation experienced in comparable circumstances elsewhere. In particular, the relevance of the levels of termination rates and telephony penetration to number portability should be considered.

– **Analysing subscriber base**

When assessing the viability of an investment in a telecoms operator, it is vital to distinguish between the number of active subscribers and the total number of subscribers. An operator can have an impressive subscriber base but little or no cash flow coming from it.

– **Financing high risk operations**

When financing operations in highly competitive and risky markets, particularly with smaller telecoms operators, first consider providing quasi-equity or subordinated debt rather than straight equity to mitigate the risk of financial underperformance.

Annex 1: Technical terms and telecoms markets definitions

The markets considered in this report are fixed telephony, fixed broadband, fixed television, mobile telephony and mobile broadband. Mobile television is ignored because it has not yet become significant in the Bank's countries of operations and fixed narrowband and mobile narrowband are likewise ignored because they are dying out. Therefore, fixed television is regarded as one market and includes cable television, satellite television and IP television, and is also considered a different market from fixed telephony.

Moreover, several of the Bank's clients aim to or do expand from one telecoms market into another and as a result, the descriptions of the case study countries in Annexes 6-11 include market figures that put each potential competitor in various markets. Detailed market definition can be difficult for regulators because it entails deciding whether companies offer similar enough services to be seen as competing in the same market. However, the broad distinctions made in this report are fairly clear. First, there is a distinction between fixed services which might use wireline or wireless connections and mobile services, which must use wireless connections. These are then divided into sub-sectors as presented in the table below (the sub-sectors covered in this report are in bold).

Figure 15: Services in telecommunications

Fixed services				**Mobile services**			
Telephony	Broadband	Television	Narrowband	Telephony	Broadband	Television	Narrowband

Table 5: Technical terms

1998 framework		EU legislation that eliminated any remaining special and exclusive rights of the state and state-owned operators. There was already competition in terminal provision, value-added services and closed user group services. It provided for individual authorisations (or licences) for operating public telephony services and for building infrastructure and also for symmetric regulations imposed on an operator having significant market power in one or more markets.
2003 framework		EU legislation that provided for: • General authorisations, allowing market entry to anyone, with individual authorisations needed only to acquire rights of use to scarce resources (which for this purpose are numbering, spectrum and rights of way) • Adoption of competition law principles for defining markets, designating operators as having significant market power, and applying remedies in such cases • Regulation of all electronic communications networks and services, including broadcasting transmission but not content.
2009 framework		EU legislation that provided for: • Creation of an official grouping of regulators to ensure a consistent application of the regulatory framework • The inclusion of functional separation as a remedy to anti-competitive practices • More flexible but better harmonised radio spectrum management with technology and service neutrality and with spectrum trading in particular frequency bands • Improved consumer guarantees, including number portability within one working day, limited duration of binding contracts, better information and network neutrality • Prevention of political interference in, and arbitrary dismissal of the heads of, national regulators.

1G	First Generation	A mobile telecoms capability that provides analogue telephony and was named retrospectively when digital telephony across wide areas emerged.
2G	Second Generation	A mobile telecoms capability that improves on 1G in enough ways to create a mass market. Three benefits of 2G over 1G are that telephone conversations are digitally encrypted, very much less spectrum is needed for a telephone call and very many more people can use mobile telephones at once. 2G networks are usually limited in their capacity and capability to telephony (comprising voice calls and text messages) and narrowband.
3G	Third Generation	A mobile telecoms capability that improves on 2G by offering reasonably high speed data transmission for broadband.
4G	Fourth Generation	A mobile telecoms capability that improves on 3G by offering extremely high speed data transmission for broadband.
Access		The use by operators of the buildings, sites and other facilities of a network owner for the installation of equipment. In this context "access" is usually paired with "interconnection" as the provision of access and interconnection can be an obligation imposed on operators with significant market power. However, the distinction between access networks (which are essentially collections of local loops) and core networks is also important.
ADSL	Asymmetric Digital Subscriber Loop	A DSL technology that divides the available frequencies on the local loop unequally so that there is a much higher speed for traffic to the subscriber premises than for traffic from the subscriber premises.
Alternative operator		An operator other than the incumbent operator.
Broadband		A data transmission service that offers speeds of at least 256 kb/s in one or both directions. Such speeds are sufficient for several applications, including IP telephony (voice over IP) and access to predominantly textual email and web pages. However, high definition television and standard definition television need speeds towards the subscriber premises of about 10 Mb/s and 2 Mb/s respectively. The speeds must be correspondingly higher if there are several simultaneous uses in the premises or poor connections.
BSA	Bit Stream Access	An arrangement in which a network owner provides paths for broadband between subscriber premises and interconnection points with operators who resell the broadband to their retail customers.
Called party pays		An arrangement in which the subscriber making the call is charged for it. In some countries where billing systems did not collect revenues for certain types of fixed network calls, the calling party pays arrangement has been used to collect revenue from mobile subscribers when they received calls from fixed subscribers.
Calling party pays		An arrangement in which the subscriber receiving the call is charged for it. This is normal for calls to geographic numbers.
CATV	Cable Television	A service providing television channels that are distributed to the subscriber premises over coaxial cable. The abbreviation comes from the American "Community Antenna Television", in which the channels are first transmitted using wireless technologies to an antenna at a hub and then distributed over coaxial cable.
CDMA	Code Division Multiple Access	A channel access method used by various wireless technologies in which channels are distinguished from one another by having different distinct orthogonal codes.
CDMA2000		A Third Generation (3G) standard for wireless communications using CDMA that offers data transmission at higher speeds than cdmaOne.
cdmaOne		A Second Generation (2G) standard for wireless communications using CDMA that provides digital telephony but has fairly limited capacity and capability.
CMTS	Cable Modem Termination System	A piece of equipment typically located in a cable television hub or head end to provide high speed data services to subscribers.
Coaxial cable		A physical network component along which signals can be transmitted by exploiting the properties of metallic wires sheathed to prevent radio frequencies from escaping. It provides quite high speed transmission.

Co-location		An arrangement in which a network owner allows its buildings, sites and other facilities to be used by other operators to install equipment. The network owner normally charges for using co-location but the other operators do not need to have their own facilities in that place.
CS	Carrier Selection	The ability of subscribers to choose through which operators they make telephone calls without changing the operators providing their local loops. It has two forms: • Carrier Pre-Selection, in which subscribers choose the operators through which they make telephone calls by making permanent arrangements with the operators providing their local loops • Carrier selection call-by call, in which subscribers choose the operators through which they make calls by dialling prefixes before the telephone numbers.
Dial-up access		A way of transmitting data that is available only if a user first dials a telephone number and then waits for the network to respond.
DOCSIS	Data Over Cable Service Interface Specification	A family of standards that permit cable television networks to be used not just for cable television transmission but for data transmission in both directions also.
DSL	Digital Subscriber Loop	A family of technologies providing much higher speeds on twisted pairs than do traditional technologies for carrying telephony traffic.
DSL AM	Digital Subscriber Loop Access Multiplexor	A piece of equipment typically located in an exchange or a cabinet in a street to provide high speed data services to subscribers.
EDGE	Enhanced Data rates for Gsm Evolution	A Second Generation (2G) standard for wireless communications that offers data transmission at higher speeds than GPRS.
EC	Electronic Communications	Telecommunications and broadcasting.
Ethernet		A wireline technology that can operate over different wires (including twisted pairs, coaxial cables and optical fibres) with correspondingly different speeds.
***ex ante* action**		An action designed to prevent future occurrences of ill-effects that have not yet happened. It typically aims to prevent anti-competitive behaviour or market abuse through measures such as promoting market entry and limiting the actions of companies in relation to their competitors and customers. It is mainly concerned with market structure, including the conditions for entering the market, the level of market concentration and the degree of product differentiation.
***ex post* action**		An action designed to prevent future occurrences of ill-effects that have happened. It typically aims to stop anti-competitive behaviour or market abuse through measures such as fines, injunctions and bans. It is mainly concerned with market conduct, including the behaviour of a company towards its competitors and customers.
Fixed network		A telecoms network that provides fixed services.
Fixed service		A telecoms service to end users that are at fixed locations.
FTTB	Fibre To The Building	A means of offering broadband in which equipment in an exchange is connected to equipment in a building by optical fibre and the equipment in the building is connected to equipment in the subscriber premises by a wireline technology (such as Ethernet) or a wireless technology (such as WiFi).
FTTC	Fibre To The Cabinet	A means of offering broadband in which equipment in an exchange is connected to equipment in a cabinet by optical fibre and the equipment in the cabinet is connected to equipment in the subscriber premises by a twisted pair on which VDSL is used.
FTTP	Fibre To The Premises	A means of offering broadband in which equipment in an exchange is connected to equipment in the subscriber premises by optical fibre.

Functional separation		A requirement for a vertically integrated operator to place wholesale services in a business unit operated under conditions designed to prevent discrimination against competitors offering retail services.
General authorisation		An authorisation to enter the market after notification to the authorities but without a requirement to obtain an approval.
GPRS	General Packet Radio Service	A Second Generation (2G) standard for wireless communications that offers data transmission at higher speeds than GSM.
GSM	Global Standard for Mobile communications	A Second Generation (2G) standard for wireless communications that provides digital telephony but has fairly limited capacity and capability.
HFC	Hybrid Fibre-Coaxial cable network	A network that uses one optical fibre to connect a central point, such as a cable television head end, to an intermediate point, such as a street cabinet, where coaxial cables are laid to the subscriber premises in a "tree and branch" arrangement.
HSPA	High Speed Packet Access	A Third Generation (3G) standard for wireless communications that offers data transmission at higher speeds than UMTS.
ICT	Information and Communications Technology	Information technology and electronic communications.
Incumbent operator		The traditional operator in a market whose position was typically established under monopoly conditions, so after a market review it would be designated as having significant market power.
Individual authorisation		An authorisation to enter the market after approval from the authorities, perhaps through the award of a licence or a concession.
Interconnection		The connection of one telecoms network to another so that traffic can be routed between the networks.
IP	Internet Protocol	The main networking technology used in the Internet and increasingly more generally in telecoms.
IPTV	Internet Protocol TeleVision	The transmission of television channels over an IP broadband network as opposed to, for example, cable television or satellite television which depend on standards other than IP.
ISP	Internet Service Provider	A provider of communication over the Internet. It is often restricted in scope to those that provide access to the Internet for end users but it could relate to those that provide connectivity between networks without having end users as customers.
IT	Information Technology	Electronic content invention, system integration and operation, program implementation and configuration and equipment design and fabrication.
LLU	Local Loop Unbundling	An arrangement in which a network owner rents its local loops to other operators. Under the arrangement a local loop can have: • Full unbundling when it provides a path for telephony and a path for broadband, both of which are controlled by the other operator all the way to the subscriber premises • Shared unbundling,when it provides a path for telephony, which is typically controlled by the network owner, and a path for broadband, which is typically controlled by the other operator.
Local loop		The "last mile" connection between an exchange and the subscriber premises.
LTE	Long Term Evolution	A standard for wireless data communications that is related to the GSM and UMTS standards and is regarded as the 4G replacement for the cdmaOne and CDMA2000 standards. In its initial form it is not really a 4G standard because, for example, its peak data rates are 100 Mb/s downstream and 50 Mb/s upstream (which are 10 per cent of the 4G ones). It increases the capacity and speed of wireless networks using new techniques and simplifies the network architecture to support IP more effectively. It offers mobility for mobile speeds

		up to 350 Km/h (or perhaps 500 Km/h in some frequency bands).
Market review		The analysis and definition of markets by considering which goods and services are substitutes for each other. It might entail applying a "hypothetical monopolist" test to judge the profitability to a company of small changes in the prices of its goods and services.
MMS	Multimedia Message Service	A service for passing multimedia messages (including audio, video and text messages) between mobile telephones.
Mobile network		A telecoms network that provides mobile services.
Mobile service		A telecoms service to end users that are not necessarily at fixed locations.
Multiple play		A package of services that might be (for example) a "triple play" of telephony, broadband and television. Though mobile telephony is sometimes packaged with fixed telephony to provide a "double play" (or even a "quadruple play" when fixed broadband and fixed television are included as well) , doing this is not always appropriate because the mobile telephone tends to be a personal rather than a household instrument.
MVNO	Mobile Virtual Network Operator	An operator that provides mobile telephony services without having its own radio network. It uses the radio network and sometimes other facilities of a mobile network operator. Mobile network operators might accept such arrangements voluntarily or after being required by the regulator to do so.
Narrowband		A data transmission service that offers speeds of at most 256 kb/s in both directions. Such a speed corresponds to one of the sensible switchover points in the technology between dial-up access and "always on" access. Various methods of access that appear to establish connections quickly but transmit data slowly actually use dial-up access, with digital signals instead of analogue ones.
Network neutrality		The principle that a network should not make anti-competitive distinctions between traffic from different sources or to different destinations when the contents of the traffic have similar applications. The term sometimes has stronger interpretations than this and might prevent distinctions even if they were not anti-competitive or the contents did not have similar applications.
NGN	Next Generation Network	An IP broadband network that lets services be ubiquitous (through "generalised mobility"), independent of the transmission technologies, and accessible without operator or network constraints. The IP broadband network therefore achieves convergence of fixed and mobile services, and various other objectives. In reality, operators claiming to implement next generation networks have one of the following much less ambitious aims – either decreasing costs by exploiting IP to simplify their ("next generation") core networks or increasing revenues by providing very high speed broadband in their ("next generation") access networks.
NMT	Nordic Mobile Telephony	A First Generation (1G) standard for wireless communications that provides analogue telephony and has very limited capacity and capability.
NP	Number Portability	The ability of subscribers to change their operators without changing their telephone numbers.
NRA	National Regulatory Authority	The national authority responsible for the telecoms sector or the larger electronic communications sector.
Operator		An organisation that provides telecoms services, whether retail or wholesale.
Optical fibre		A physical network component along which signals can be transmitted by guiding light. It supports very high speed transmission.
PON	Passive Optical Network	A network that uses one optical fibre to connect a central point to a distribution point, where separate paths along separate optical fibres to multiple end points are split out using passive equipment, not active electronics that needs power to be supplied.
Postpaid service		A service that is paid for in arrears. In most cases there is also a charge for subscribing to the service which is paid in advance. Fixed telephony and broadband services are usually postpaid, though they can be prepaid in some countries.
Prepaid service		A service that is paid for in advance. Usually the subscriber has an account that can be topped up by telephone, over the Internet or in a shop. Sometimes

		the credit in the account expires if it is not used soon enough. Mobile telephony and broadband services can be prepaid or postpaid. Prepaid ones facilitate usage at levels matching intermittent or low incomes and postpaid ones facilitate buying telephones through the contractual payments.
RO	Reference Offer	A set of conditions that includes technical specifications as well as commercial arrangements and prices for certain wholesale services, such as access, interconnection or unbundling.
SIM	Subscriber Identity Module	A circuit that stores information on mobile telephony equipment, particularly for identifying and authenticating the subscriber.
SLA	Service Level Agreement	A formal agreement between operators that defines the levels of service that one provides for another.
SMP	Significant Market Power	The ability of a company to raise prices consistently and profitably above competitive levels, particularly by exceeding marginal costs and long run average incremental costs. In the EU, an operator having significant market power is subject to specific obligations such as having cost-oriented tariffs. An operator is presumed not to have significant market power if it has less than 25 per cent of a market in a geographic area, and to have significant market power if it has more than 50 per cent. Evidence for having significant market power can come from the existence of barriers to entry and expansion and the absence of countervailing buyer power.
SMS	Short Message Service	A service for passing short text messages between mobile telephones. In some countries you can send an SMS via fixed telephones.
Spectrum		The radio frequency spectrum used by operators to provide services without wiring. The spectrum extends beyond the radio frequencies, and optical frequencies are sometimes used for wireless communications without optical fibres. However, most wireless communications use radio frequencies.
Telecommunications		Telephony and data transmission (including audio and video transmission) by broadband or narrowband.
Termination rate		A charge made by one operator to another operator for carrying traffic from that other operator to end points on its network.
Twisted pair		A physical network component along which signals can be transmitted by exploiting the properties of two metallic wires (usually copper) twisted together. It provides quite high speed transmission, or even very high speed transmission when supplemented by DSL. It is the traditional component of local loops that connect exchanges to subscriber premises.
UMTS	Universal Mobile Tele-communications Service	A Third Generation (3G) standard for wireless communications that offers data transmission at higher speeds than EDGE.
Universal access		A form of a service intended to be available, accessible and affordable to everyone, at least by providing it at community access points such as public payphones and internet centres.
Universal service		A form of a service intended to be available, accessible and affordable to everyone by providing it in every house.
USF	Universal Service Fund	A fund set up to subsidise the implementation of a universal service policy. It might receive contributions from operators or the state.
USO	Universal Service Obligation	An obligation imposed on operators in order to implement a universal service policy. It might be accompanied by an arrangement for compensating the operators for the extra costs occurred.
VDSL	Very high bit rate Digital Subscriber Loop	A DSL technology that provides much higher speed than does ADSL over short distances (of up to about one kilometre). It can be configured with quite similar, or alternatively very different, capacities for traffic to and from the subscriber premises.
VOIP	Voice Over Internet Protocol	The use of an Internet service for making or receiving voice calls.
WiFi	Wireless	A wireless technology that is typically used over short distances for low power

	Fidelity	operation using unlicensed frequencies.
WiMax	Worldwide inter-operability for Microwave access	A wireless technology that is typically used for fixed or mobile communications using licensed frequencies.
Wireless		The provision of telecoms using the radio frequency spectrum.
Wireline		The provision of telecoms using wires such as twisted pairs, coaxial cables or optical fibres.
WLR	Wholesale Line Rental	An arrangement in which a network owner provides paths for telephony between subscriber premises and interconnection points with operators who resell the telephony to their retail customers.

Annex 2: Portfolio analysis

Aggregate view

Over the past two decades (between 1992-2011) the Bank signed 189 ICT/TIM projects, with a total value of € 2.91 billion and an average value of €15.4 million[40]. Of these projects:

- 58 per cent provided debt financing (as opposed to equity financing or guaranteed financing), amounting to 72 per cent of the financing
- 74 per cent provided financing for electronic communications (as opposed to information technology or media), amounting to 91 per cent of the financing
- 88 per cent provided financing for private sector clients (as opposed to public sector clients), amounting to 82 per cent of the financing.

In the Evaluation Period (2006-11) the Bank signed 79 ICT/TIM projects, with a total value of €710 million and an average value of €9.0 million. Of these projects:

- 51 per cent provided debt financing (as opposed to equity financing or guaranteed financing), amounting to 50 per cent of the financing
- 46 per cent provided financing for electronic communications (as opposed to information technology or media), amounting to 73 per cent of the financing
- 99 per cent provided financing for private sector clients (as opposed to public sector clients), amounting to 99 per cent of the financing.

In the case study countries (Albania, Latvia, Moldova, Poland, Russia, Serbia and Ukraine) the Bank signed 75 ICT/TIM projects, with a total value of €1.45 billion and an average value of €19.3 million. Of these projects:

- 56 per cent provided debt financing (as opposed to equity financing or guaranteed financing), amounting to 63 per cent of the financing
- 76 per cent provided financing for electronic communications (as opposed to information technology or media), amounting to 86 per cent of the financing
- 93 per cent provided financing for private sector clients (as opposed to public sector clients), amounting to 97 per cent of the financing.

Figures below provide information how the projects varied by year and by country.

[40] Among these ICT/TIM projects are 22 media projects that are not ICT projects in the sense understood here. Moreover, projects are counted in this report by separating the individual national components in multiple-country (regional) projects and separating debt and equity components in mixed (debt and equity) projects. The numbers of projects are therefore larger than numbers that are produced without separating out these components. In particular, they increase the apparent numbers, and decrease the apparent average values, of information technology and media projects, because information technology and media projects cover multiple countries more frequently than electronic communications projects do.

Variation by year

Financial instruments

Over the years, the proportion of projects providing debt financing, and the proportion of debt financing itself, tended to fall in favour of equity financing projects but there was no consistent pattern. A single large event, such as a privatisation, could distort the figures; for instance, the privatisation of Bulgarian Telecom in 2004 required €84 million debt and the privatisation of Polkomtel in 2011 required €200 million equity.

Figure 16: Numbers of projects signed

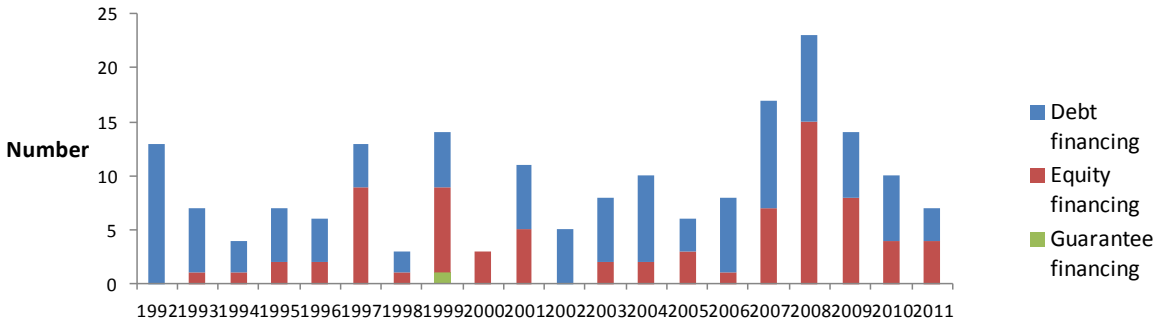


Figure 17: Total values of projects signed

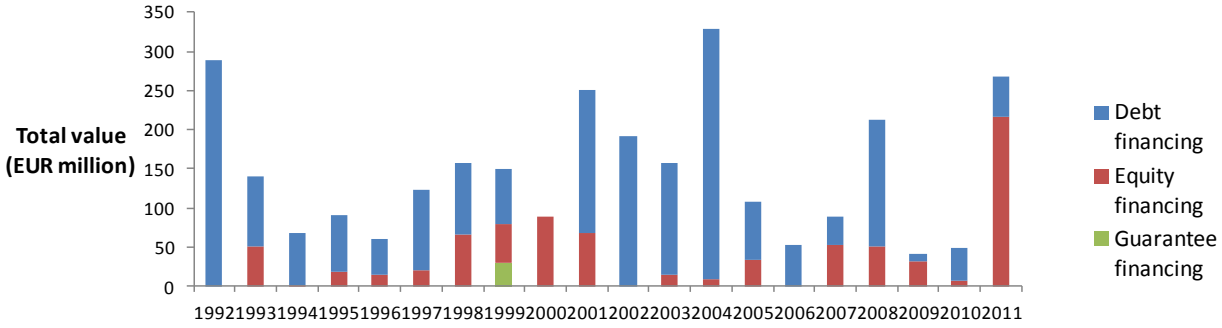
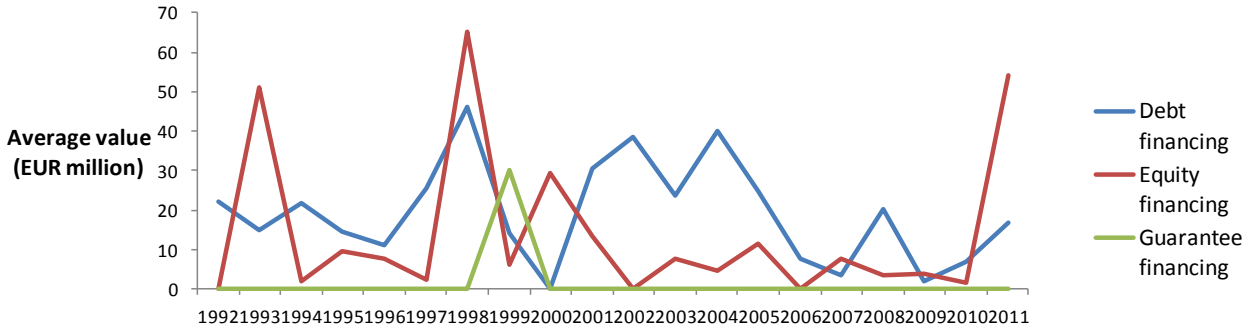


Figure 18: Average values of projects signed



Markets

Before 2001 virtually all the projects provided financing for electronic communications.[41] Then some information technology projects were approved and the other ICT/TIM projects signed were predominantly in the media sector (press publications and outdoor advertisements), which are outside the scope usually chosen for ICT.

The information technology projects tended to be high in number but low in average value, but if the regional projects (particularly those for ViaOne in 2009 and Asseco in 2009) are not separated into their national components, their average value is appreciable. Some of the other projects (such as that for News Outdoors in 2003) are comparable in value with large electronic communications projects.

Figure 19: Numbers of projects signed

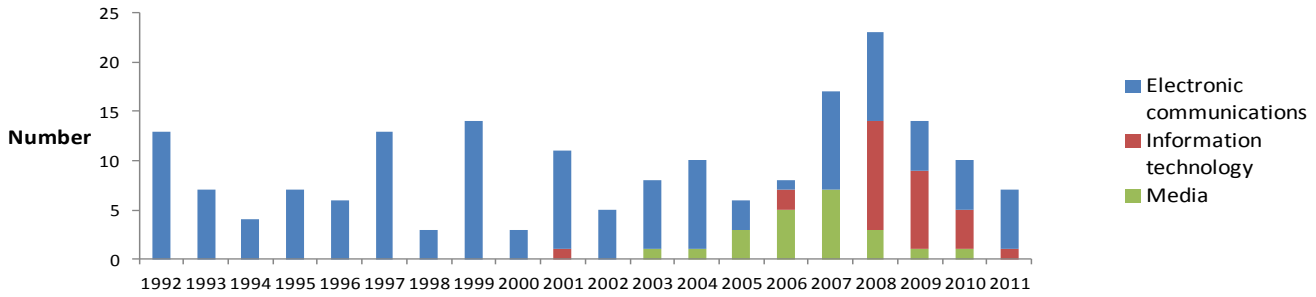


Figure 20: Total values of projects signed

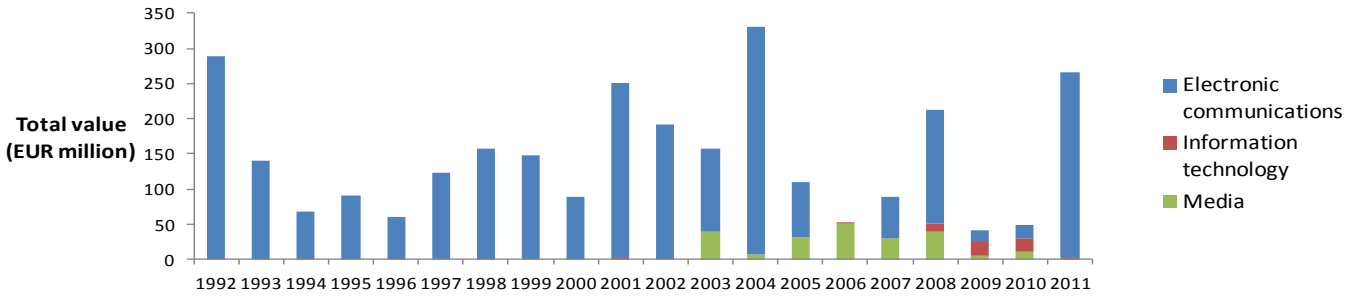
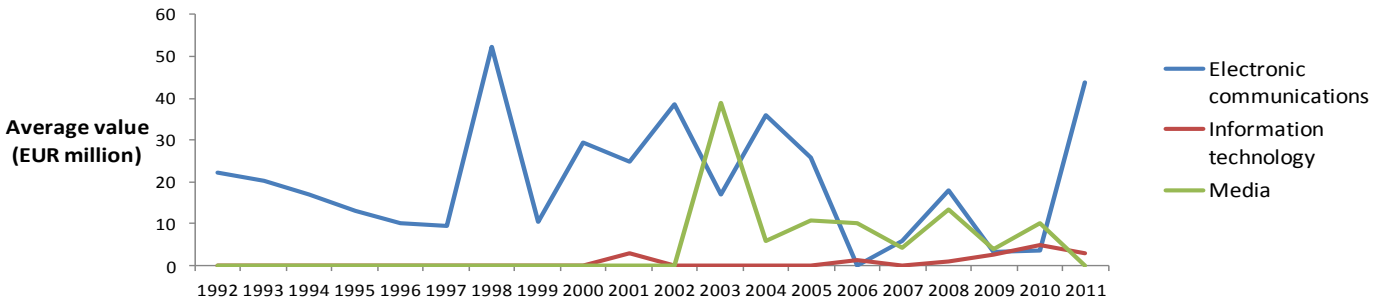


Figure 21: Average values of projects signed



[41] However, some of the clients were also involved in equipment design and fabrication which is classified in this report as information technology.

Project clients

Virtually all the projects provided financing for private sector clients after 2003 but even before then there were years without new projects providing financing for public sector clients. After 1995, financing tended to be directed instead to private purchasers of public sector clients. However, there were exceptions such as Tajik Telecom in 2001, Telecom Srspke in 2002 and Kazakh Telecom in 2003.[42]

Figure 22: Numbers of projects signed

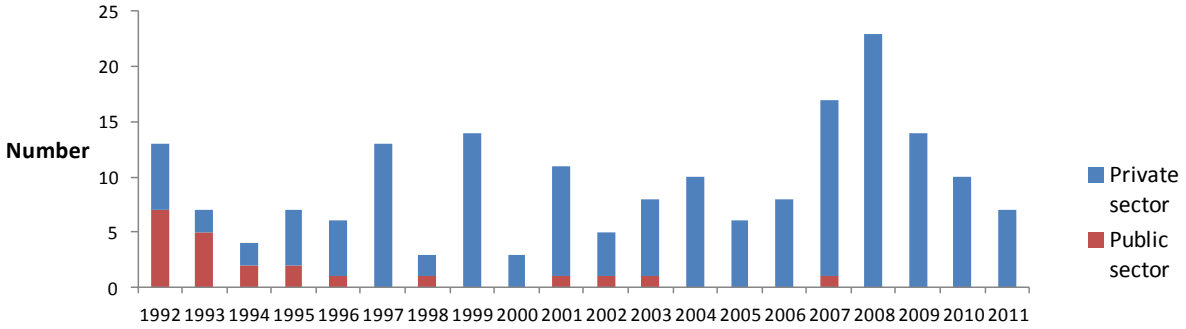


Figure 23: Total values of projects signed

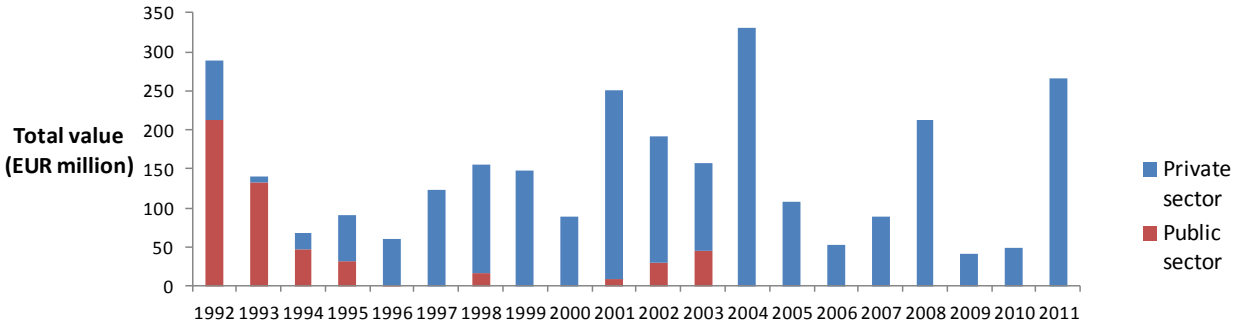
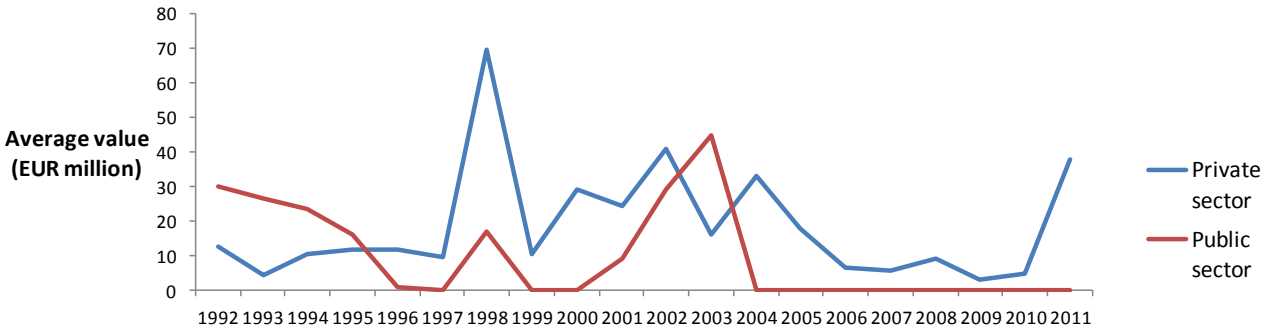


Figure 24: Average values of projects signed



[42] Some financing is classified wrongly in the data bases as having private sector clients, instead of public sector clients. This is so, in particular, for the financing of Hungarian Telecom in 1992 and Romtelecom in 1992, at times when privatisation had not begun. This report classifies these two instances correctly but otherwise keeps the classifications provided by the data bases and might therefore underestimate the proportion of financing directed to public sector clients.

Groups of countries

Countries are grouped according to their relevance to the EU enlargement process thus:

- EU 2004 membership: Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic and Slovenia
- EU 2007 membership: Bulgaria and Romania
- EU acceding membership: Croatia
- EU candidate membership: FYR Macedonia, Montenegro, Serbia and Turkey
- EU potential membership: Albania, Bosnia and Herzegovina and Kosovo
- Eastern Partnership: Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine. Russian Federation: Russia
- Central Asia: Kazakhstan, Kyrgyz Republic, Mongolia, Tajikistan, Turkmenistan and Uzbekistan.

In many of the years covering the period 1992-2011, the EU 2004 countries had the largest number of projects and the highest average value of projects, even since their accession to the EU. In other years the EU 2007 countries predominated. The eastern partnership countries, Russia and the Central Asia countries had significant numbers of projects and average values of projects intermittently.

Further information about the trends comes from examining individual countries in successive groups of years.

Figure 25: Numbers of projects signed

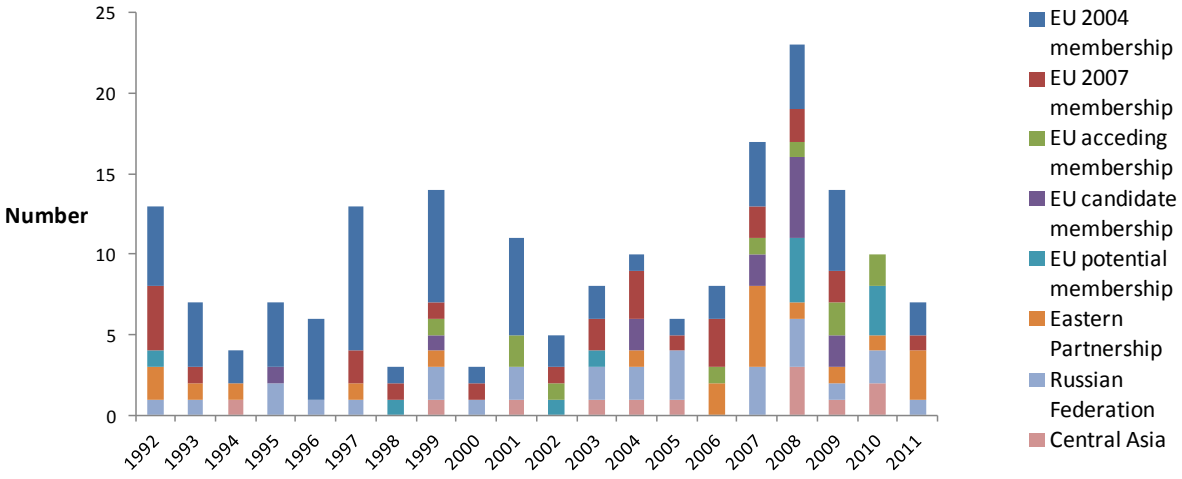


Figure 26: Total values of projects signed

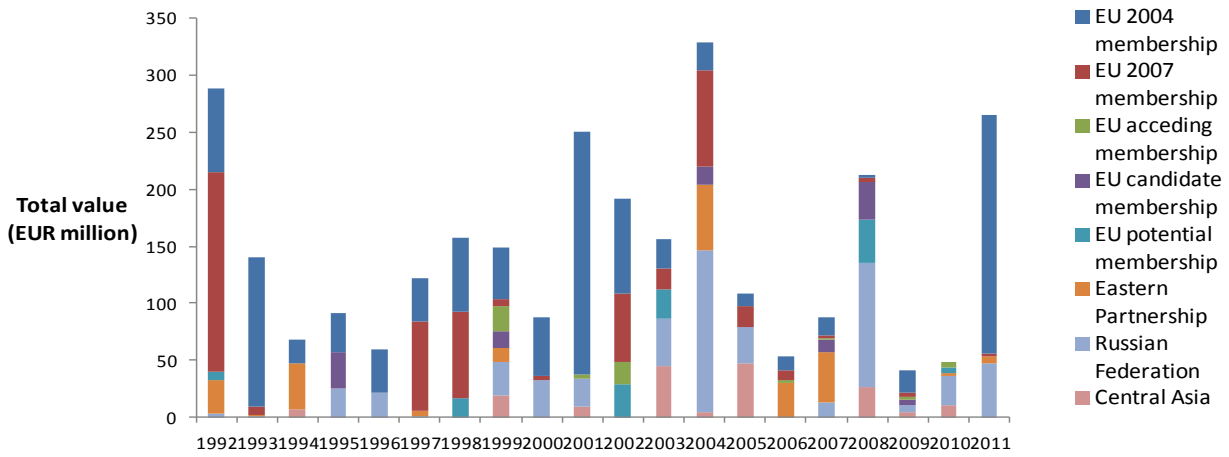
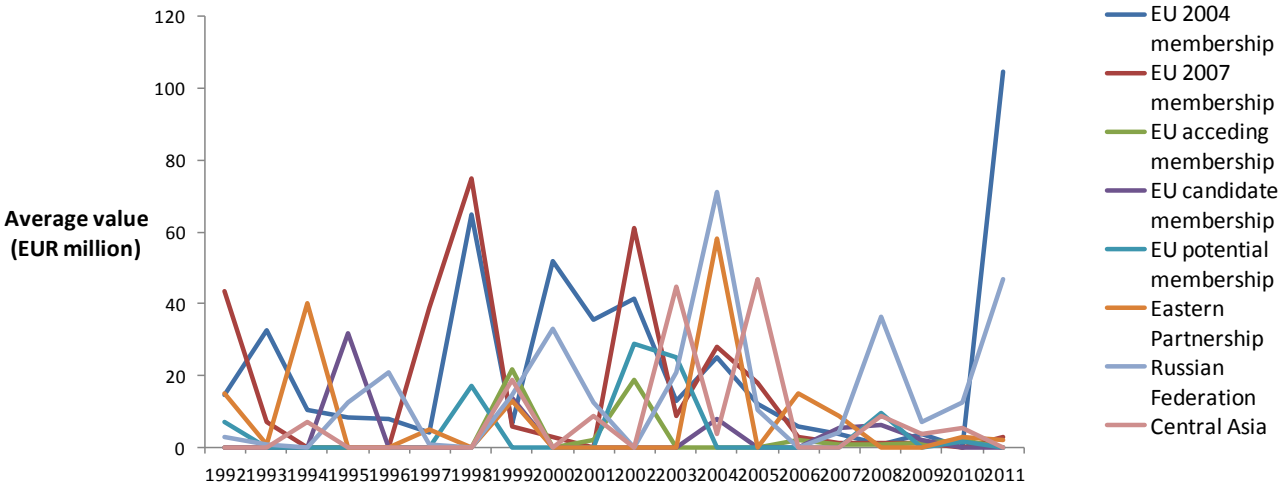


Figure 27: Average values of projects signed



Variation by country

Financial instruments

There were roughly equal proportions of projects providing debt financing and projects providing equity financing in most countries but those providing debt financing had higher overall value in all countries except Lithuania and Poland.

Poland, Romania and Russia had 19 per cent, 14 per cent and 19 per cent of the financing respectively. In Romania and Russia almost all of this was debt financing.

Figure 28: Numbers of projects signed

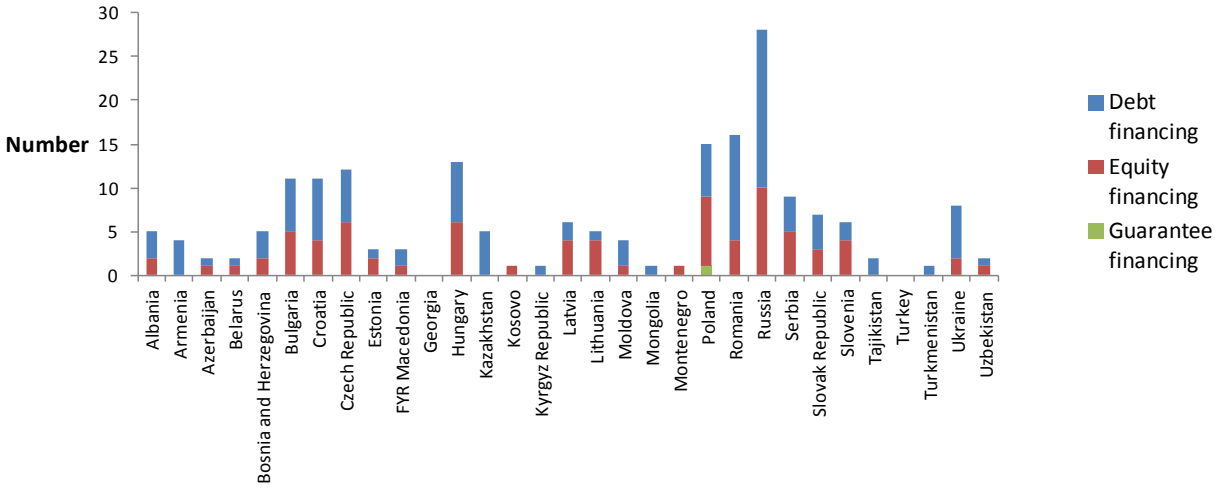


Figure 29: Total values of projects signed

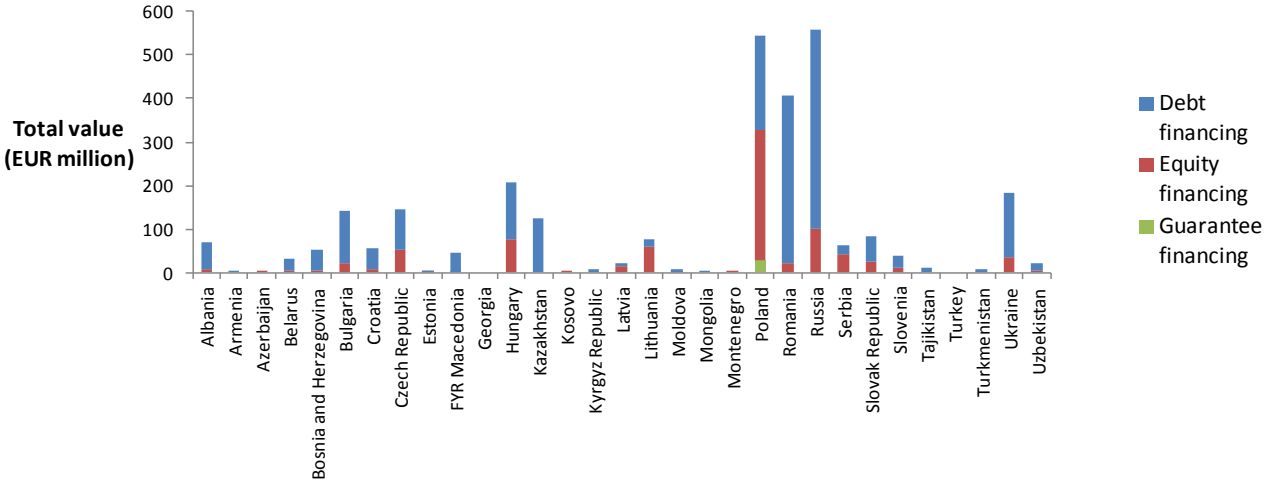
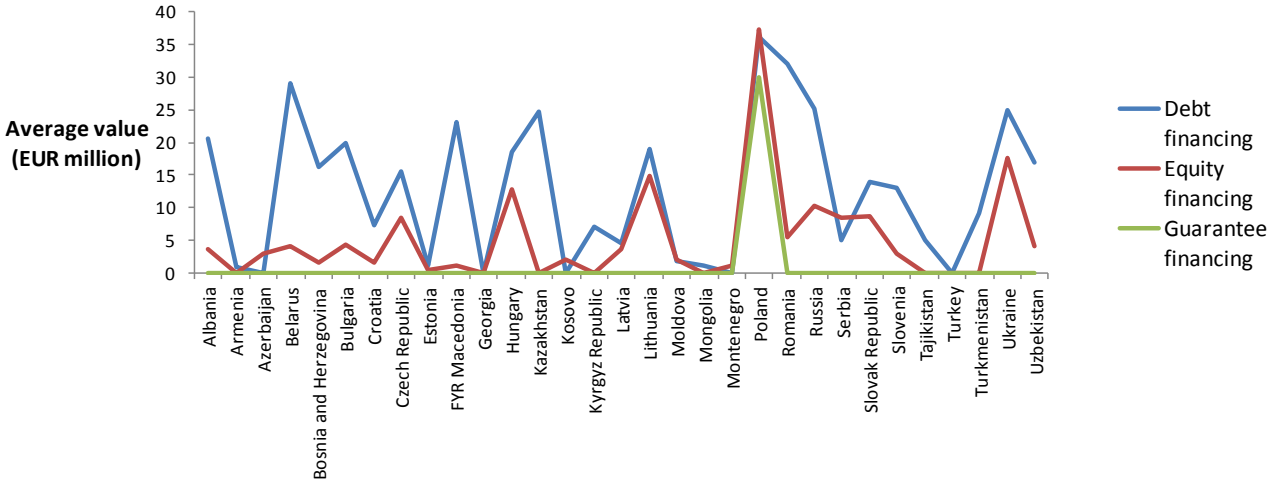


Figure 30: Average values of projects signed



Markets

There were information technology projects in several countries of South Eastern Europe, but they were often components of the regional projects of ViaOne and Asseco and had low average values. Electronic communications projects predominated almost everywhere in terms of total values and average values, though other projects were important in Russia.

Figure 31: Numbers of projects signed

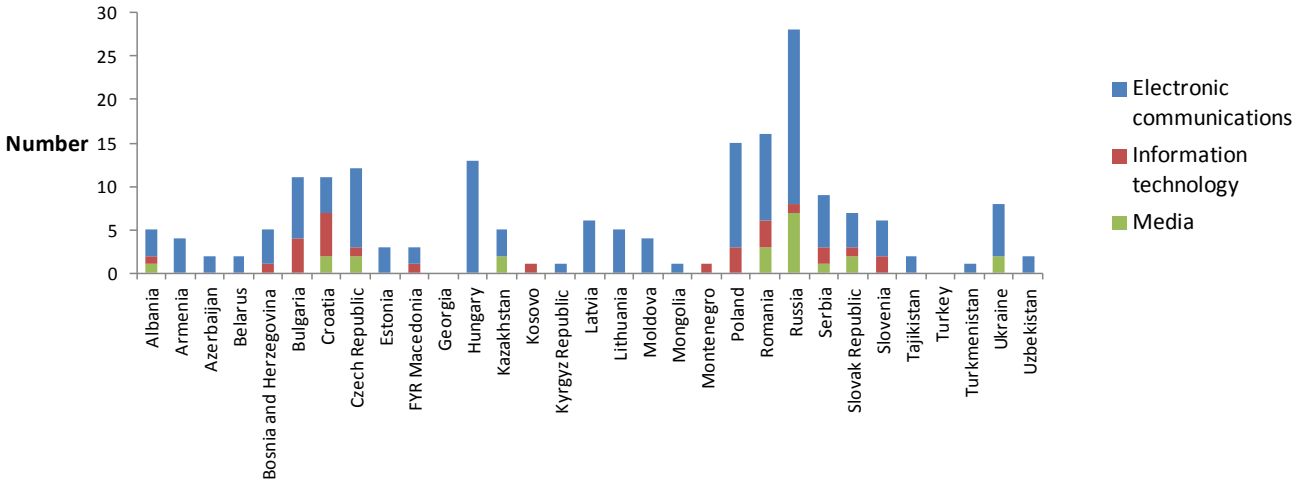


Figure 32: Total values of projects signed

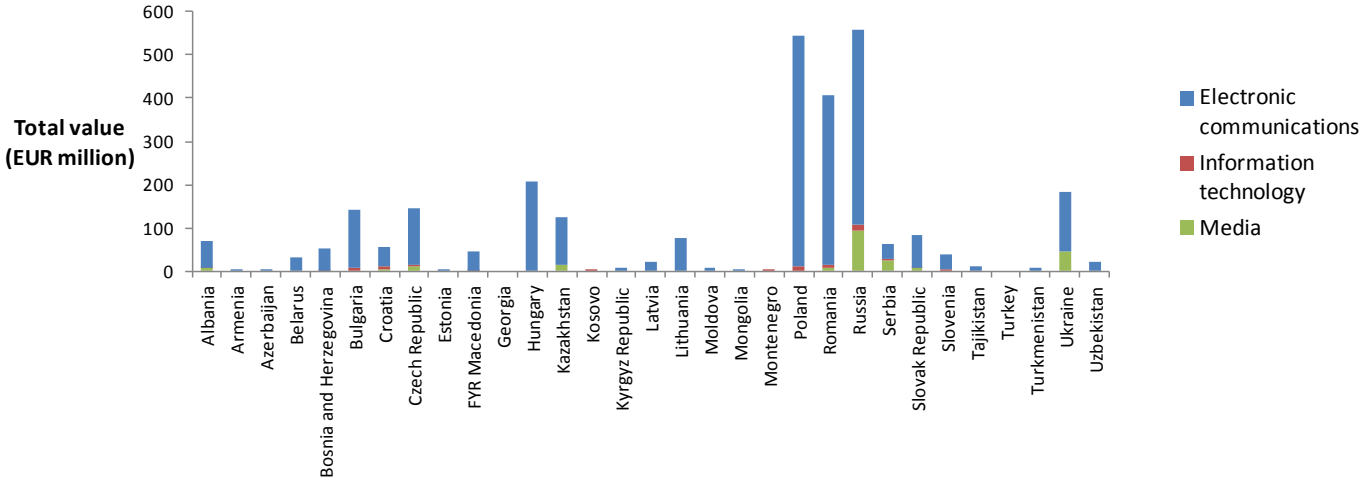
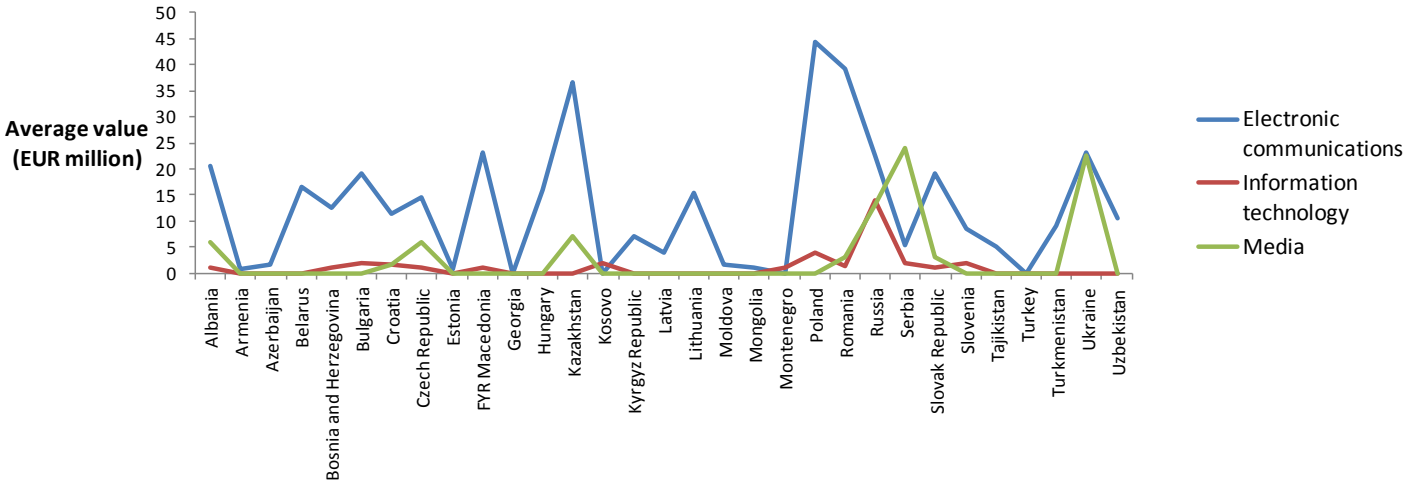


Figure 33: Average values of projects signed



Project clients

Although there were few projects providing financing for public sector clients, in most countries they had much higher average values than the projects providing financing for private sector clients.

Figure 34: Numbers of projects signed

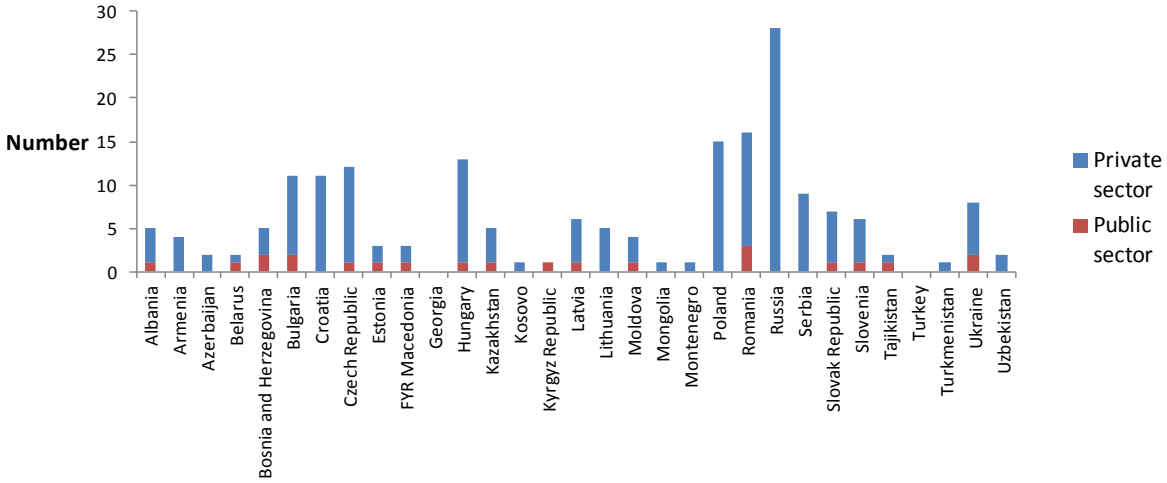


Figure 35: Total values of projects signed

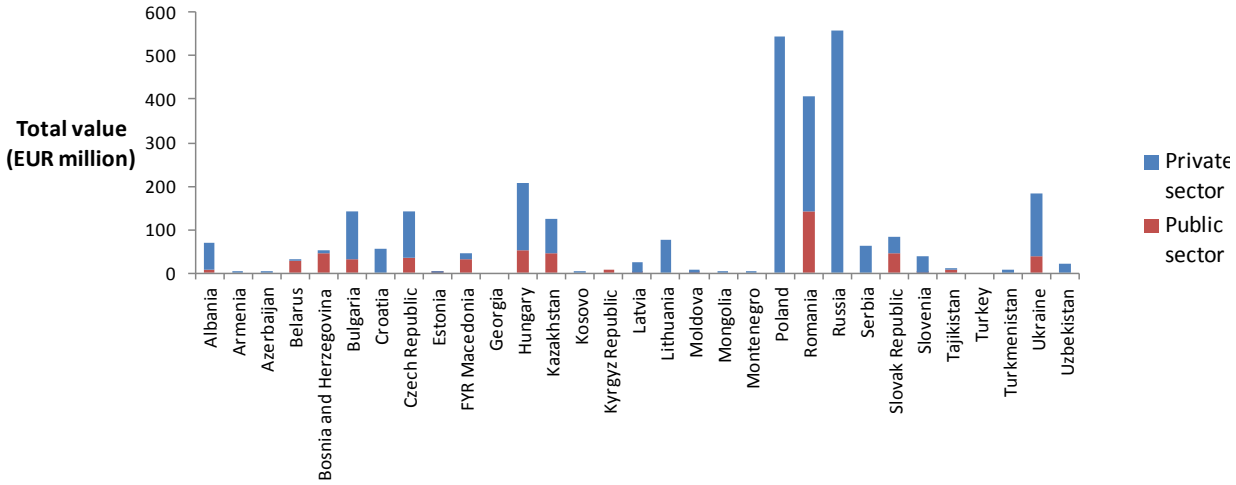
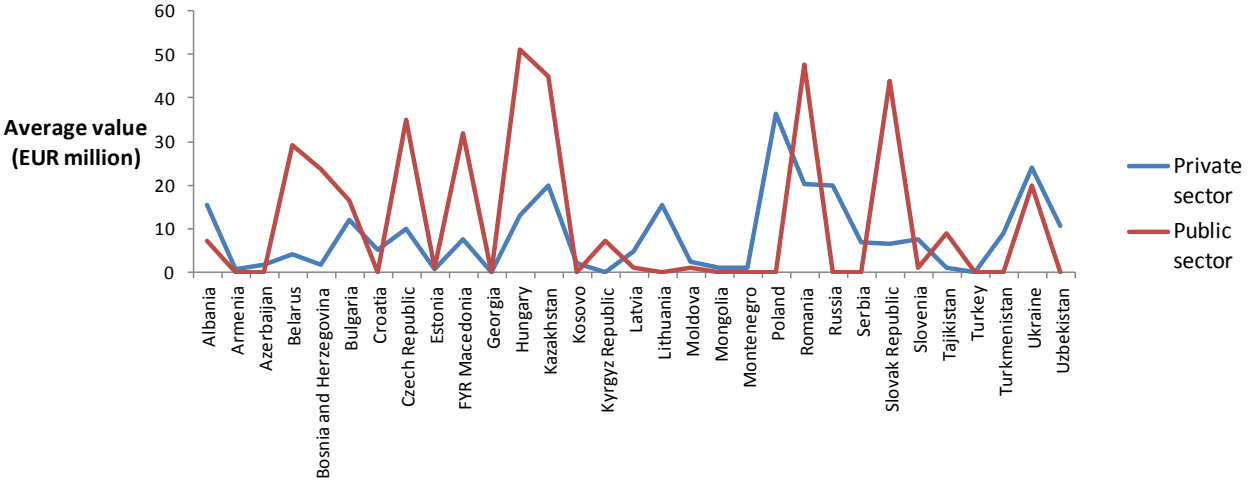


Figure 36: Average values of projects signed



Groups of years

Years are grouped in fives, corresponding roughly to successive five year periods of operation of the Bank's telecoms policies of 1992 and 1999.

Broadly, the number of projects rose over the years: 37 were signed in 1992-96, 44 were signed in 1997-2001, and 71 were signed in 2007-11. Though only 37 projects were signed in 2002-06, the total value of projects rose from €649 million in 1992-96 to €840 million in 2002-06 but then fell back to €657 million in 2007-11. Similarly, the average value of projects rose from €18 million in 1992-96 to €23 million in 2002-06 but then fell back to €9 million in 2007-11.

Poland, Romania and Russia had 19 per cent, 14 per cent and 19 per cent of the financing respectively. In Romania financing declined over the last five years, as it did in Poland until the privatisation of Polkomtel. Moreover, before 2007-11 the Bank did not have ICT projects in many of its countries of operations and it has still has not had any in Georgia and Turkey.

Figure 37: Total values of projects signed

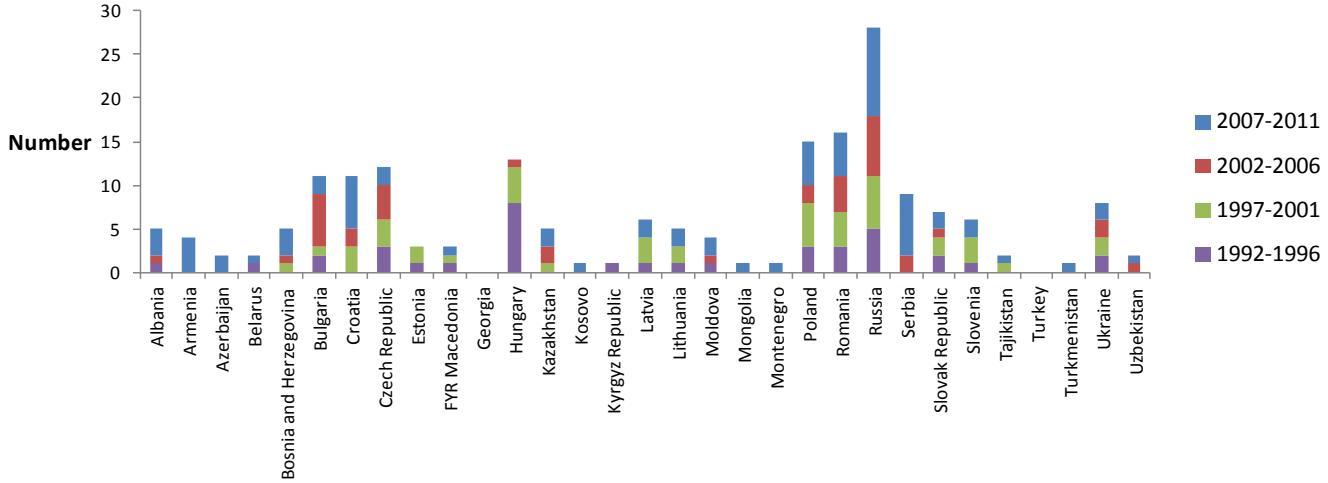
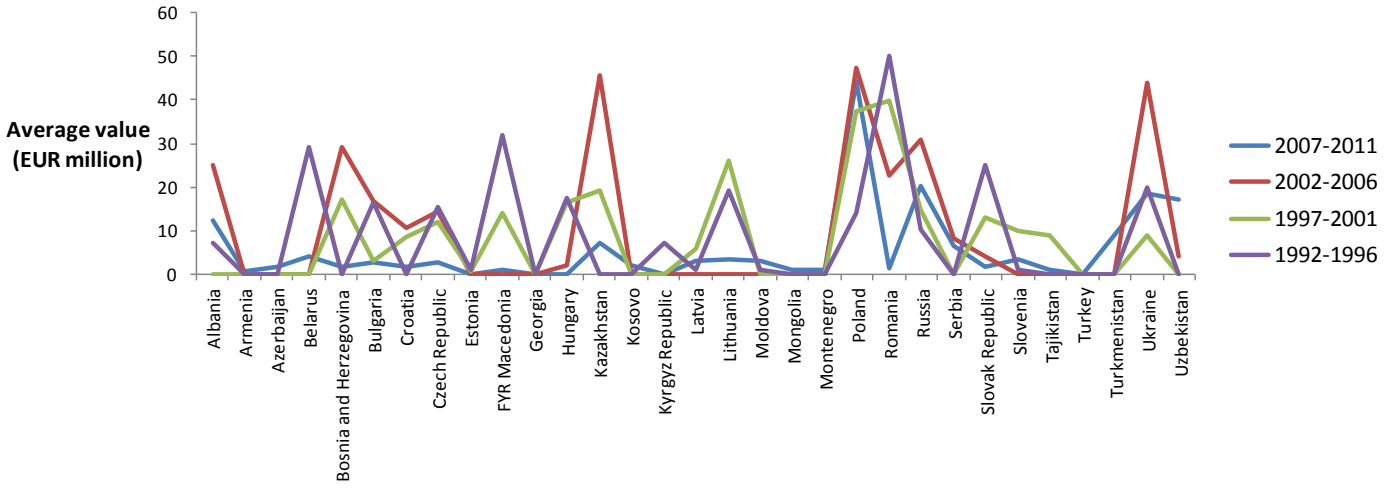


Figure 38: Average values of projects signed



Combined view

Groups of years and countries

Shifts in Bank priorities were reflected to some extent in changes in the proportions of projects devoted to particular groups of countries. Therefore, in both the EU 2004 countries and the EU 2007 countries the proportions of the number of projects rose to peaks of 55 per cent and 27 per cent respectively several years before accession and fell away to 21 per cent and 10 per cent respectively thereafter. Correspondingly, the proportions rose in the EU candidate countries and the EU potential countries from 3 per cent and 3 per cent respectively to 13 per cent and 10 per cent respectively. Similarly, the proportions of the total value of projects in both the EU 2004 countries and the EU 2007 countries rose to peaks of 54 per cent and 23 per cent respectively several years before accession and fell away to 38 per cent and 2 per cent respectively thereafter. Correspondingly, in Russia the proportion rose from 8 per cent to 31 per cent. This proportion did not correlate well with the proportion of the number of projects,

Figure 39: Numbers of projects signed

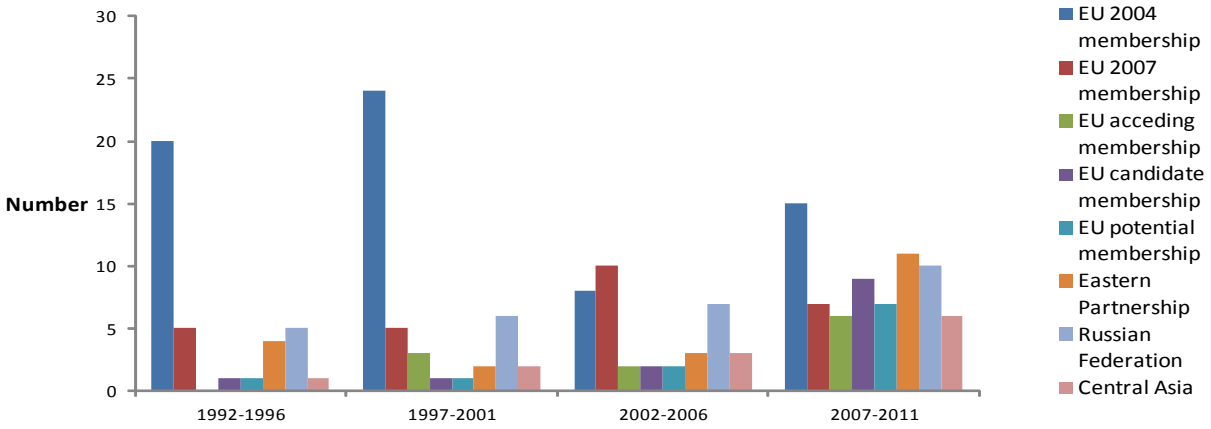


Figure 40: Total values of projects signed

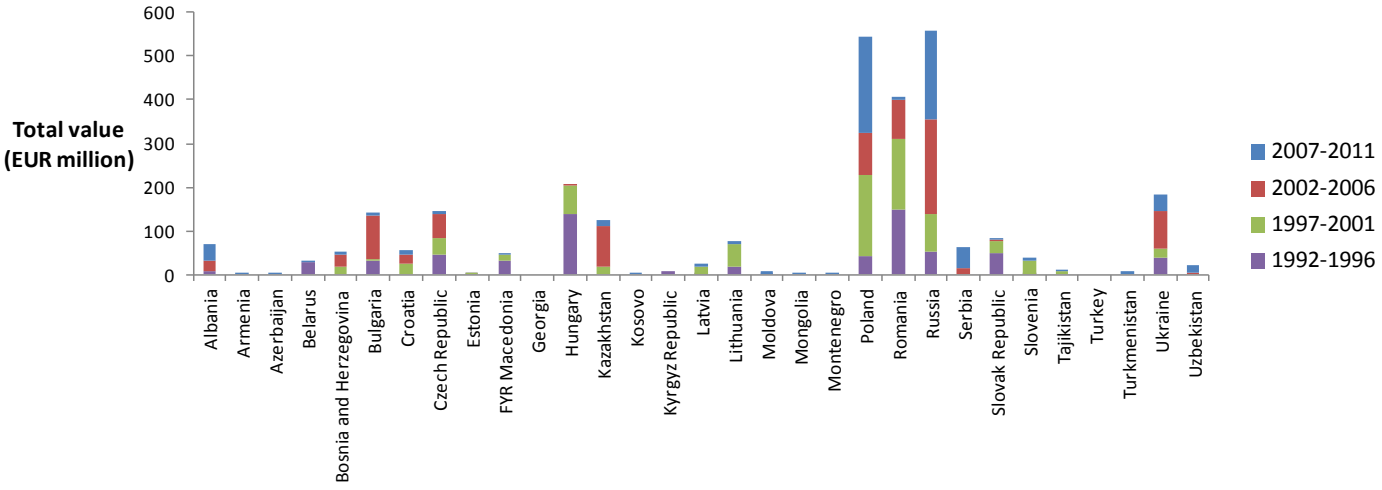
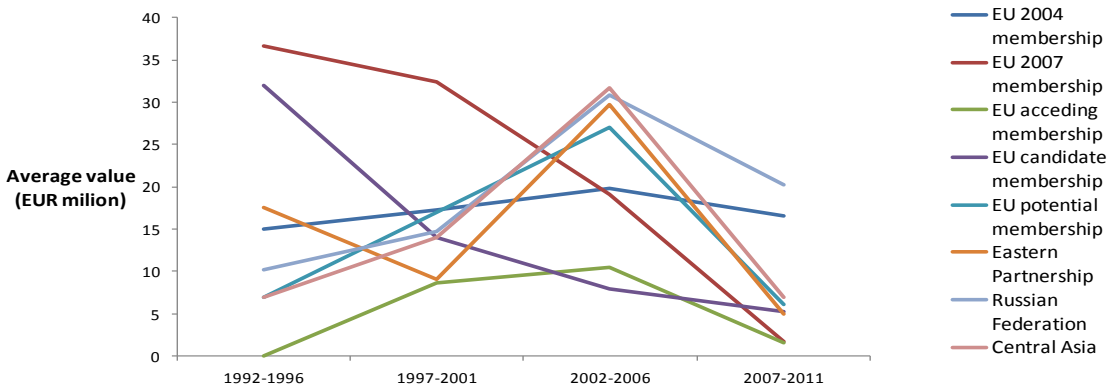


Figure 41: Average values of projects signed



Annex 3: Project listing

Table 6: Details of case study projects

Project ID	Case study project name	Description	Signing date	Financing sector, type and value (€ 000)	Main market	Country
37836	**Albtelecom**	Expansion of fixed network, development of broadband and of mobile network	18-Apr-08	Private Debt 30,000	Fixed telephony	Albania
37709	**Bitė Communications (Project Bella)**	Expansion of mobile network	13-Mar-07	Private Equity 5,000	Mobile telephony	Latvia
40750			27-Oct-09	Private Equity 1,020		
36919	**Sun Communications**	Expansion and modernisation of cable network and introduction of new services, including broadband	13-Jun-06	Private Debt 186	Fixed television	Moldova
37261			30-Mar-07	Private Debt 4,444		
37865			30-Mar-07	Private Equity 1,945		
42640	**Polkomtel**	Privatisation of mobile network operator	12-Oct-11	Private Equity 200,000	Mobile telephony	Poland
42737	**Tele2**	Expansion of mobile network in the regions	17-Jun-11	Private Debt 47,454	Mobile telephony	Russia
39039	**Orion (Media Works)**	Acquisition of a stake in a broadband operator, with a view to consolidating several operators into a national one	19-Dec-08	Private Debt 6,000	Fixed broadband	Serbia
40051			22-Dec-08	Private Equity 0.001		
38267	**Oisiw Cable (Braeside Investments)**	Improvements to telecoms and media infrastructure	10-Aug-07	Private Equity 22,198	Fixed television	Ukraine

Table 7: Details of policy review projects other than case study projects

Identifier	Policy review project name	Description	Signing date	Financing sector, type and value (€ 000)	Main market	Country
41711	**Interactive TV**	Roll out of cable television network with internet and voice over IP services	30-Sep-11	Private Debt 1,579	Fixed television	Armenia
41236	**Atlant Telekom**	Expansion of a leading privately-owned ISP	29-Mar-11	Private Equity 4,399	Fixed broadband	Belarus
41889	**Cable BiH**	Consolidation of cable television operators in smaller towns by a successful second tier operator	21-Dec-10	Private Debt 2,050	Fixed television	Bosnia and Herzegovina

Identifier	Policy review project name	Description	Signing date	Financing sector, type and value (€ 000)	Main market	Country
41811	**Yokozuna Net**	Increase in network reach, data centre capacity and working capital	20-Dec-10	Private Debt 869	Fixed broadband	Mongolia
42735	**Emitel**	Development of communication tower business	02-Jun-11	Private Equity 9,463	Mobile telephony	Poland
35892	**Enforta**	Provision of broadband services in the regions and cities	15-Feb-07	Private Debt 3,588	Fixed broadband	Russia
38180			15-Feb-07	Private Equity 4,314		
39439			19-Dec-08	Private Debt 10,763		
42037			20-Dec-10	Private Debt 10,677		
39576	**Mobile TeleSystems (MTS)**	Expansion and modernisation of mobile network	23-Dec-08	Private Debt 88,550	Mobile Telephony	Russia
39576				Private Debt 9,200		Turkmenistan
39576				Private Debt 17,250		Uzbekistan
40497	**Russian Towers**	Development of communication tower business	21-Dec-09	Private Equity 7,424	Mobile telephony	Russia
37849	**Srpske Kablovske Mreze (SBB)**	Expansion and modernisation of cable network and introduction of new services, including broadband	19-Feb-07	Private Debt 1,500	Fixed television	Serbia
37835	**Project Cable Europa**	Increase in penetration of cable television, broadband and virtual private networks	30-May-07	Private Equity 9,554	Fixed television	Serbia

Table 8: Details of telecoms projects signed by the Bank in the evaluation period other than policy review projects

Identifier	Name	Description	Signing date	Financing sector, type and value (€ 000)	Main market	Country
38013	**Shant**	Purchase of new equipment and premises to enable the company to improve its outside broadcast ability	17-Aug-07	Private Debt 395	Fixed television	Armenia
40743			31-Jul-09	Private Debt 161		
42567			10-Feb-11	Private Debt 520		
39175	**Irshad Telecom**	Development of telecoms network	29-Apr-08	Private Debt 359	Mobile telephony	Azerbaijan
40588	**Datacell and Elcell**	Expansion of the wireless broadband operator	26-Mar-10	Private Equity 2,940	Fixed broadband	Azerbaijan

Identifier	Name	Description	Signing date	Financing sector, type and value (€ 000)	Main market	Country
40630	**3H**	Acquisition of cable television operators	09-Jul-09	Private Equity 6,000	Fixed television	Slovenia
41834			21-Oct-10	Private Equity 1,509		Bosnia and Herzegovina
38856	**Telecom Technology**	Expansion of telecoms services of the company to rural and remote areas of the country	27-Aug-08	Private Debt 1,028	Fixed broadband	Tajikistan

Table 9: Telecoms financing provided by IFIs and private banks or investors in the evaluation period

Country	EBRD projects		European Investment Bank projects		World Bank projects		Other telecoms infrastructure projects with private investment	
	Number	Value (€ million)	Number	Value (€ million)	Number	Value (€ million)	Number	Value (€ million)
Albania	1	30.00	0	0.00	0	0.00	1	105.00
Armenia	2	2.66	0	0.00	2	5.43	1	206.00
Azerbaijan	2	3.30	0	0.00	0	0.00	1	328.00
Belarus	1	4.40	0	0.00	0	0.00	1	790.00
Bosnia and Herzegovina	2	3.56	0	0.00	0	0.00	2	810.00
Bulgaria	0	0.00	2	175.00	0	0.00		
Croatia	0	0.00	0	0.00	0	0.00		
Czech Republic	0	0.00	1	150.00	0	0.00		
Estonia	0	0.00	1	40.00	0	0.00		
FYR Macedonia	0	0.00	0	0.00	0	0.00	1	94.00
Georgia	0	0.00	0	0.00	0	0.00	4	212.00
Hungary	0	0.00	1	540.00	0	0.00		
Kazakhstan	0	0.00	0	0.00	0	0.00	1	207.0
Kosovo	0	0.00	1	87.00	0	0.00		
Kyrgyz Republic	0	0.00	0	0.00	0	0.00	1	80.00
Latvia	1	6.02	0	0.00	0	0.00		
Lithuania	1	6.53	0	0.00	0	0.00		
Moldova	1	6.58	0	0.00	1	1.24	1	30.00
Mongolia	1	0.87	0	0.00	3	31.84	1	59.00
Montenegro	0	0.00	0	0.00	0	0.00	1	42.00
Poland	2	209.46	1	640.00	0	0.00		
Romania	0	0.00	1	150.00	0	0.00		
Russia	4	172.77	1	115.00	1	17.53		
Serbia	3	17.05	0	0.00	0	0.00	2	2,238.00
Slovak Republic	0	0.00	2	0.00	0	0.00		
Slovenia	1	6.00	1	100.00	0	0.00		

Tajikistan	1	1.03	0	0.00	0	0.00		
Turkey	0	0.00	2	800.00	0	0.00		
Turkmenistan	1	9.20	0	0.00	0	0.00		
Ukraine	1	22.20	0	0.00	1	14.64	2	931.00
Uzbekistan	1	17.25	0	0.00	0	0.00		

Annex 4: Selected findings from past evaluations of Bank telecoms operations

Findings about policy formulation

- *Understanding information technology markets by working with financing intermediaries*

When analysing demand for new information technology products and services the Bank should resist being carried away by any market hype associated with them. The potential users in the domestic market must be plentiful, interested and knowledgeable. If there is insufficient analysis of emerging information technology markets and applications (as was the case with the Internet Framework) the combination of investments can lack an industrial rationale. Regional specialised equity funds might be more successful than a framework, as they can focus on specific groups of enterprises.

The Bank should ensure that investments in information technology companies are related to the readiness for such technology in the host countries. In addition, it should consider channelling financing through specialised regional funds if the readiness is uncertain.

- *Ensuring government commitment to market liberalisation and effective regulation*

A government commitment to market liberalisation and effective regulation is required to meet transition impact objectives in telecoms. Without this there is unlikely to be a level playing field for alternative operators. For instance, a new mobile telephony operator (K-Mobile in Kazakhstan) was unlikely to have a significant transition impact until a separate technical cooperation project by the Bank contributed to the framework discussion with the government leading to liberalisation.

Before committing to any financing, the Bank should address market liberalisation and effective regulation, which are pre-requisites for most ICT projects, with the government.

- *Engaging with other international financial institutions to achieve sector reform*

Some governments, as the owners of the incumbent fixed telephony operators, might be reluctant to offend constituents by correcting the imbalance in retail tariffs which are typically below cost for local calls and above cost for international calls or to lower the value of its assets by reducing the dominance of the operator. These obstacles are politically sensitive and cannot be tackled solely by the Bank, particularly in larger countries. Close cooperation with multiple international financial institutions (with different emphases, approaches and contacts) is critical.

The Bank should coordinate its work more closely with that of other international financial institutions to encourage sector reform.

- *Providing universal service cost-effectively*

Universal access to telecoms needs to be carefully planned, particularly in large countries with low population densities. A government might aim to ensure full access in rural areas but fail to define subsidies or develop a universal service fund. Minimum subsidy auctions and infrastructure sharing might facilitate market solutions without wasting resources.

The Bank should encourage the cost-effective provision of universal service in telecoms, emphasising competitive means such as minimum subsidy auctions and cooperative means such as infrastructure sharing, through policy dialogue with governments and operators.

Findings about information dissemination

- *Motivating client commitment to technical cooperation programmes*

The Bank tends to maintain full control of technical cooperation focus and findings of a project if it provides the entire financing but doing this does not ensure enough client commitment. Continued involvement in the work at both high and low levels of the client organisation helps to ensure subsequent action. Financial contributions by the government can also demonstrate involvement - in Kazakhstan, for instance, government contributions to a specific consultancy assignment resulted in greater receptivity to recommendations for strengthening the regulatory framework.

The Bank should seek increased ownership of technical cooperation results from the client by maintaining involvement at both high and low levels in the client organisation and requesting reimbursement of costs if the client has adequate resources.

Findings about project planning

- *Staying competitive with technology*

To remain competitive, businesses often need to offer a full array of services. In 2001 the Bank advised a client (Oskar Mobil in the Czech Republic) against bidding for a 3G licence as the immediate benefits would be outweighed by the capital expenditure and put excessive strain on finances. The Bank's position changed, however, within a few years when it supported a debt restructuring to give the same client the financial flexibility to bid for a 3G licence, which was bought at a substantially lower price than others paid in 2001. In the end, the Bank saw that even though 3G technology would benefit only a fraction of the market at the time, no operator could run the risk of offering lesser services than its competitors. While the decision to get a licence could be deferred, missing it altogether would have hurt the position of the client in the market.

When analysing potential expenditures, the Bank should recognise the need for operators to invest just to stay credible in technology-driven markets.

- *Having strong equity partners in rapidly growing companies*

Where the Bank has a small equity stake and just one representative on the Board of the company, a strong equity partner can help to achieve growth objectives. For instance, with Gallery in Russia, it was only with the entry of a strong equity partner that there could be substantial influence on the company in all areas. Therefore, the Bank should seek this kind of support .

- *Reducing risk following debt restructuring*

In leveraged situations, the Bank must be particularly vigilant in assessing the client ability to meet debt obligations while also investing in the company to remain competitive. By being aware of a funding shortage early, the Bank can take a more proactive role in debt restructuring in order to protect its equity and optimise its position in the new debt structure. For instance, when Oskar Mobil in the Czech Republic had poor liquidity, the Bank became an anchor investor in a bond issue to make the bond more marketable. In doing so, the exposure of the Bank to the higher risk instrument increased while that of the lead arranger of the senior credit facility and of the bond issue decreased. An analysis of the proportions of debt and equity for the investors would have shown that the position of the Bank was deteriorating

relative to that of the lead arranger. In fact, restructuring the debt through the bond issue was extremely successful and the Bank received a fee for being an anchor investor.

When participating in debt restructuring the Bank should evaluate the opportunity cost of its additionality; - for instance, the Bank could share a fee with co-arrangers of a credit facility irrespective of its final take in a bond issue, in return for taking the role of an anchor investor that no commercial bank would accept.

- *Reducing risk from foreign exchange rate changes*

The Bank funds its investments in euros, converting to and from the local currency on entry and exit. A rate of return calculated in euros is appropriate for assessing the return to the Bank - however, it can reflect exchange rate fluctuations more than the performance of the project, which should be assessed by examining the rate of return in the local currency before conversion to euros.

The Bank could seek to reduce its foreign exchange risk in an equity investment by either funding the investment in its original currency (in which case the cost of funding would vary with interest rates over the (unknown) investment period) or hedging the investment over a holding period, in which case the cost of hedging would be incorporated in the expected rate of return at approval but there would be no protection against foreign exchange risk if the investment period did not coincide with the holding period.

- *Improving corporate governance through initial public offerings*

The focus of Gallery in Russia on an initial public offering had the biggest impact on corporate governance and management practices. A desire to meet listing requirements led the company to move away from making cash payments that decreased transparency in the industry and posed reputational risks to shareholders. The Bank should encourage timely decisions to take companies public, which will result in improved corporate governance.

Annex 5: International comparisons

Table 10: Demographics

Indicator	Case study countries							EU comparator countries						Bank extended mandate countries				
	Albania	Latvia	Moldova	Poland	Russia	Serbia	Ukraine	Austria	Denmark	Germany	Lithuania	Slovenia	Sweden	Egypt	Jordan	Morocco	Tunisia	Turkey
Population (million)	3.2	2.3	3.6	38.1	142.0	7.4	45.9	8.4	5.5	81.8	3.3	2.0	9.4	82.6	6.4	32.7	10.7	72.0
Population density (per km^2)	111	35	105	122	8	83	76	199	129	229	51	101	21	83	72	74	65	93
Population in the 3 largest cities (per cent)	26	40	30	8	12	30	11	25	18	8	32	20	17	21	48	15	12	24
Population under 15 years of age (per cent)	23.4	13.7	16.9	15.2	15.0	15.2	14.1	14.8	18.0	13.4	15.0	14.1	16.6	34.9	39.6	34.7	25.4	26.1
Population over 63 years of age (per cent)	9.4	17.3	10.2	13.5	13.1	17.1	15.8	17.6	16.6	20.6	16.0	16.5	18.3	5.2	5.6	6.1	7.9	6.9

The source and date are UNECE and 2009 except for Egypt, Jordan, Morocco and Tunisia, for which they are:

- Wikipedia and 2012 (Tunisia: 2011) for the first and second rows
- Geohive and 2004 (Egypt: 2006) for the third row
- US Census Office and 2010 for the fourth and fifth rows.

Table 11: Economics

Indicator	Case Study Countries							EU comparator countries						Bank extended mandate countries				
	Albania	Latvia	Moldova	Poland	Russia	Serbia	Ukraine	Austria	Denmark	Germany	Lithuania	Slovenia	Sweden	Egypt	Jordan	Morocco	Tunisia	Turkey
Unemployed active adult population, per cent	13.0	7.5	4.0	7.1	6.3	13.6	6.4	3.8	3.4	7.5	13.7	4.4	6.2	9.4	11.9	10.0	13.3	9.7
GDP per head (US$ PPP)	8,416	16,239	2,841	19,009	14,915	11,477	7,350	39,785	39,842	37,115	17,136	29,065	39,614	6,540	5,900	5,052	9,478	15,021
Gross average monthly wage (US$)	409	1,007	246	1,239	694	820	343	4,322	5,962	3,928	922		4,200					1,156

The source and date are UNECE and 2008 except for Egypt, Jordan, Morocco and Tunisia, for which they are:

- National census offices (with different, incomparable, definitions of unemployment) and 2011 (Egypt: 2009) for the first row
- IMF and 2011 for the second row.

Table 12: Development rankings

Indicator	Year	Case study countries							EU comparator countries						Bank extended mandate countries				
		Albania	Latvia	Moldova	Poland	Russia	Serbia	Ukraine	Austria	Denmark	Germany	Lithuania	Slovenia	Sweden	Egypt	Jordan	Morocco	Tunisia	Turkey
Human development index (rank out of 187)	2011	70	43	111	39	66	59	76	19	16	9	40	21	10	113	95	130	94	92
Corruption perceptions index (rank out of 183)	2011	95	61	112	41	143	86	152	16	2	14	50	35	4	112	56	80	73	61
Press freedom index (rank out of 179)	2011-2012	96	50	53	24	142	80	116	5	10	16	30	36	12	166	128	138	134	148
Judicial independence index (rank out of 142)	2011-2012	101	67	132	53	123	128	134	22	2	7	84	68	3	41	49	80	58	88
Global competitiveness index (rank out of 142)	2011-2012	78	64	93	41	66	95	82	19	8	6	44	57	3	94	71	73	40	59

The sources are:

- United Nations Development Programme for the first row
- Transparency International for the second row
- Reporters Without Borders for the third row
- World Economic Forum for the fourth and fifth rows.

Table 13: ICT - Penetration

Indicator	Year	Case study countries							EU comparator countries						Bank extended mandate countries				
		Albania	Latvia	Moldova	Poland	Russia	Serbia	Ukraine	Austria	Denmark	Germany	Lithuania	Slovenia	Sweden	Egypt	Jordan	Morocco	Tunisia	Turkey
Number of fixed telephony subscribers per 100 people	2010	10.4	23.6	32.5	20.0	31.4	40.5	28.5	38.7	47.4	55.4	22.1	44.9	52.5	11.9	7.8	11.7	12.3	22.3
	2005	8.9	31.7	24.7	31.0	27.9	32.9	24.9	45.4	61.8	66.4	23.4	50.9	62.4	14.1	11.8	4.4	12.7	27.8
Number of fixed broadband connections per 100 people	2010	3.3	19.3	7.5	13.0	11.0	11.2	6.5	23.8	37.7	31.7	20.6	24.2	31.8	1.8	3.2	1.6	4.6	9.7
	2005	0.0	2.6	0.3	2.5	1.1	0.4	0.3	14.3	24.8	13.1	6.9	9.8	27.9	0.2	0.4	0.8	0.2	2.3
Number of Internet users per 100 people	2010	45.1	75.1	40.0	62.3	43.0	40.9	45.0	72.7	88.7	82.0	62.1	70.0	90.0	26.7	38.0	49.0	36.8	39.8
	2005	6.0	46.0	14.6	38.8	15.2	26.3	3.7	58.0	82.7	68.7	36.2	46.8	84.8	11.7	12.9	15.1	9.7	15.5
Number of mobile telephony subscribers per 100 people	2010	141.9	102.4	88.6	122.7	166.3	129.2	118.6	145.8	124.7	127.0	147.2	104.6	116.0	87.1	107.0	100.1	106.0	84.9
	2005	48.7	81.2	28.9	76.4	83.4	71.8	64.0	105.3	100.6	96.0	127.5	87.9	97.8	18.4	58.7	40.8	57.3	64.0

The source is ITU.

Table 14: ICT- Prices

Indicator	Year	Case Study Countries							EU comparator countries						Bank extended mandate countries				
		Albania	Latvia	Moldova	Poland	Russia	Serbia	Ukraine	Austria	Denmark	Germany	Lithuania	Slovenia	Sweden	Egypt	Jordan	Morocco	Tunisia	Turkey
ICT price basket (rank out of 165)	2010	89	31	101	51	32	60	69	11	10	20	37	40	15	78	84	117	65	80
ICT price basket (rank out of 161)	2008	92	42	103	41	34	44	76	28	4	19	40	32	8	67	82	104	53	
ICT price basket percentage of GNI per head	2010	4.3	1.1	5.4	1.8	1.1	2.2	2.6	0.6	0.6	0.8	1.2	1.2	0.6	3.5	3.9	9.5	2.5	3.6
	2008	7.7	1.7	10.8	2.4	1.4	3.3	4.6	1.1	0.5	0.7	1.5	1.4	0.7	4.4	4.4	12.5	3.1	
Fixed telephony sub-basket percentage of GNI per head	2010	1.9	1.0	1.5	2.0	0.8	1.1	1.3	0.7	0.6	0.8	1.4	0.9	0.6	1.7	2.9	9.2	0.8	2.3
	2008	1.3	1.1	1.8	2.6	0.8	1.0	1.5	0.7	0.6	0.8	1.5	1.0	0.5	2.0	3.1	11.1	1.0	
Fixed broadband sub-basket percentage of GNI per head	2010	3.2	1.2	5.0	1.8	1.3	3.1	3.2	0.7	0.9	1.1	1.1	1.7	0.8	4.6	5.7	5.1	3.4	2.6
	2008	9.2	2.5	18.5	2.5	1.7	6.4	7.1	1.5	0.6	1.0	1.5	2.1	0.7	5.5	6.7	9.2	4.1	
Mobile telephony sub-basket percentage of GNI per head	2010	7.7	1.0	9.7	1.5	1.2	2.3	3.2	0.4	0.2	0.4	1.0	1.1	0.4	4.1	3.2	14.3	3.2	6.0
	2008	12.6	1.4	12.0	2.0	1.6	2.5	5.2	1.2	0.2	0.4	1.4	1.1	0.8	5.6	3.4	17.2	4.3	
ICT price basket value (US$)	2010	14.3	11.0	7.0	22.4	8.4	10.8	6.2	21.8	27.2	26.5	11.0	24.3	25.7	6.0	13.0	22.0	7.7	26.6
Fixed telephony sub-basket value (US$)	2010	6.4	10.1	1.9	33.4	6.2	5.4	3.4	25.3	27.8	27.0	13.1	17.9	25.5	2.9	9.5	21.3	2.5	16.8
Fixed broadband sub-basket value (US$)	2010	10.7	12.8	6.5	18.0	9.9	15.3	7.6	26.2	43.9	39.4	10.3	34.2	34.5	8.0	18.9	11.7	10.5	19.2
Mobile tel. sub-basket value (US$)	2010	25.8	10.1	12.6	15.8	9.2	11.6	7.5	13.9	9.8	13.1	9.6	20.8	17.2	7.0	10.5	33.1	10.0	43.9

The source is ITU.

Table 15: ICT – sector development rankings

Indicator	Year	Case study countries							EU comparator countries						Bank extended mandate countries				
		Albania	Latvia	Moldova	Poland	Russia	Serbia	Ukraine	Austria	Denmark	Germany	Lithuania	Slovenia	Sweden	Egypt	Jordan	Morocco	Tunisia	Turkey
ICT development index (rank out of 152)	2010	78	40	57	38	47	50	62	16	4	15	35	24	2	91	73	90	84	59
	2008	81	39	64	41	49	47	59	21	3	13	35	24	2	92	73	100	82	60
Access sub-index (rank out of 152)	2010	82	48	59	38	41	45	62	15	8	6	40	25	5	78	74	79	92	61
	2008	92	46	62	43	47	45	59	15	5	7	36	26	3	83	75	86	93	58
Use sub-index (rank out of 152)	2010	74	35	60	41	53	55	86	16	6	20	40	30	2	89	80	65	81	56
	2008	79	36	76	40	63	52	91	19	5	16	41	26	4	87	80	64	73	56
Skills sub-index (rank out of 152)	2010	84	18	59	13	21	50	7	34	6	44	9	3	19	104	61	122	78	66
	2008	71	18	53	15	24	50	12	32	7	39	10	5	14	104	60	122	84	77

The source is ITU.

Annex 6: Albania

The market

Table 16: Distribution of subscribers among operators (2011)

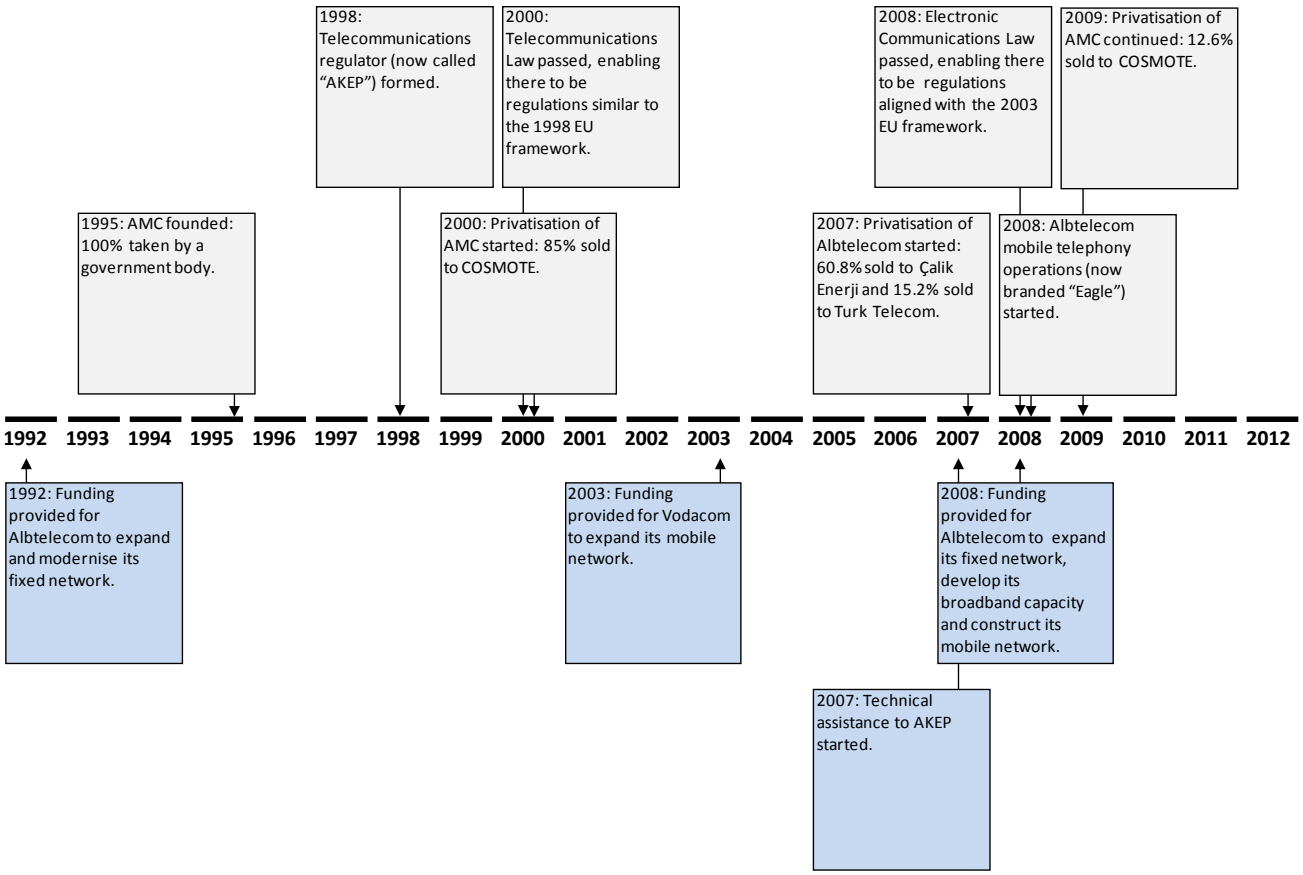
Operator	Fixed services						Mobile services			
	Telephony subscribers		Broadband subscribers		Television subscribers		Telephony subscribers		Broadband subscribers	
	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)
Albtelecom	259	76	60	43			1,110	21		
Abcom	27	8	29	21						
ASC	10	3	10	7	140					
Digitalb					300					
AMC	8	2					1,920	37	55	19
Vodafone							1,809	34	228	81
Plus							397	8		
Others	35	11	41	29						
Total	339	100	140	100		100	5,236	100	283	100

Table 17: Market trends (2011)

Indicator	Fixed services						Mobile services			
	Telephony subscribers		Broadband subscribers		Television subscribers		Telephony subscribers		Broadband subscribers	
	Number	Trend	Number	Trend	Number	Trend	Number	Trend	Number	Trend
Subscribers (000)	339	↑	140	↑↑		↑	5,236	↑↑	283	↑↑
Subscribers per 100 people	12	↑	5	↑↑		↑	189	↑↑	10	↑↑
Revenues (€ 000)							271,139	↓↓		
Revenues per subscriber (€)							52	↓↓		
Outgoing call minutes (000,000)	728	↑					5,215	↑↑		
Outgoing call minutes per subscriber	2,148	↑					996	↑		
Total call minutes (000,000)	1,570	↑					11,121	↑↑		
Total call minutes per subscriber	4,632	↑					2,124	↑		

Investment in the sector rose from €73 million in 2010 to €74 million in 2011.

Figure 42: National developments and Bank involvements in telecoms (1992-2012)



The regulatory environment

Policy making

The Ministry of Innovation and Information and Communications Technology considers that it has enacted the 2009 framework, though parts of the policy paper prepared in 2010 have yet to be put into effect.[43]

A broadband policy was drafted in 2011 and a full strategy is to be approved by late 2012. Other papers on the digital agenda and cybersecurity are also planned and users are requesting action plans, not mere statements of objectives. As Annex 5 confirms, Albania has a much more youthful population than other countries in south-eastern Europe but lags behind on all ICT development indices, so these action plans are desirable but could require external assistance.

Regulation

The regulator, the Electronic and Postal Communications Authority (AKEP), has gone through upheavals in recent years. All of the members of AKEP's steering board were replaced in 2008 and 2009. As the members both before and after replacement were those favoured by particular political parties, the independence of AKEP is open to doubt. Politically motivated appointments might be inevitable because the regulator should conform with government policy. Unfortunately, frequent changes can undermine the willingness to take action, for fear of being fired.

[43] Annex 1 explains phrases relating to regulation and technology, such as "2009 framework".

At one stage the effectiveness of AKEP was also limited by poor relations between the steering board and the operational units. The ministry maintains that the steering board members after replacement are working more efficiently than those before. Even so, some of the decisions taken by the steering board were not put into regulations until 2010-11. This led to delays in implementing number portability, local loop unbundling, carrier selection and the licensing of spectrum for fixed broadband and mobile broadband.

Currently, the ministry considers that delays in developing the regulatory framework are due to parliament not AKEP, although debates continue over the split in operational responsibilities between the ministry and AKEP. By contrast, Albtelecom believes that AKEP is slow to act, as illustrated by the failure to move quickly to stop Vodafone from blocking an Eagle promotional game that was designed to coincide with the European Cup.

Market access

Albtelecom still has a large proportion of the fixed telephony market in Albania but there are several alternatives to it. There is even an intended new entrant with the Albanian Telecoms Union (ATU) planning to provide wholesale services by building a fibre network alongside the roads. This illustrates one area in which the regulatory framework is not fully appreciated as the Ministry of Public Works and Transport appeared to be granting "exclusive" rights to ATU to lay fibres without any open competition.

Vodafone and AMC had a duopoly of the mobile telephony market for eight years. Eagle, which is 100 per cent owned by Albtelecom, received a 2G licence in 2004 but did not start service until 2008 after privatisation. Plus, which is led by Post and telecoms of Kosovo, received a 2G licence in 2009 and started service in late 2010. Its business case in such a small country is doubtful, when even Eagle is still recovering its costs.

Vodafone and AMC also have a duopoly of the mobile broadband market, with 3G licences bought in 2010 and 2011 respectively. The arrival of AMC led to a fall in prices but as there is still a duopoly there could be further falls when the other operators (Eagle and Plus) agree to buy 3G licences.

Much of the 2003 EU framework is in place with the corresponding problems of ensuring effective execution and the intended consequences. For instance, although there is mobile number portability, if mobile termination rates are high, its effect can be limited or even, as in some countries, be opposite to intentions, with customers moving to the largest operator.[44] The AKEP glide path for mobile termination rates appears to be rather gentle and is still forecast to end in 2015 with fairly high rates. AKEP considers that there might be a further glide path beyond that.

Bank operations

Strategy

The Bank strategy for Albania approved in 2006 aimed to promote the privatisation and restructuring of Albtelecom. The Bank strategy for Albania approved in 2009 aimed to:

- strengthen the independence and governance of the regulator, which had been shown to be lacking
- encourage liberalisation facilitating the introduction of technologies such as WiMax

[44] High mobile termination rates can also contribute to high penetrations, as people use phones on different networks to avoid making off-net calls.

– examine possible further technical assistance relating to broadband deployment, rural access, digital switchover and innovations in digital media.

Technical cooperation

A technical cooperation project in the Legal Transition Programme lasted from 2007 to 2009. Its objectives were to improve regulation generally and develop the interconnection regime specifically. It was highly regarded by the Chief Compliance Officer of Albtelecom (who had participated in it when at AKEP), the Chairman of AKEP and the Chief of Cabinet of the ministry. All the draft regulations created by it were subsequently finalised.

Investments

Table 18: Bank telecoms investment projects (1992-2012)

Identifier	Name	Description	Signing date	Financing sector, type and value (€000)
	Albtelecom	Modernisation and expansion of fixed network	16 December 1992	Public Debt 7,334
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Of these projects, the second Albtelecom one was selected for further study and it fell in the evaluation period.

The project reviewed

Background

The project aimed to assist in privatising Albtelecom, the dominant fixed telephony operator. The investors planned to boost fixed services and to launch mobile services. Transition impact was expected from the successful restructuring of the company, including the launch of new products, service standards and IT systems such as new billing and management information systems. The plans included a significant restructuring of the labour force with increased outsourcing, as well as early retirement and redundancy programmes. The commercial risk in doing this was significantly mitigated by the presence in the investors of Turk Telecom alongside Çalik Enerji.

In the years before privatisation, Albtelecom had increased its number of fixed telephony subscribers by a factor of seven and although it gained some extra subscribers after privatisation, its rate of expansion fell greatly and ultimately became negative. However, it updated some of its IT systems, including that for customer relationship management, albeit two years later than the date proposed in the transition impact objectives for the project.

At time of writing, Albtelecom is converting its network to a Next Generation Network (NGN). The reason for this is unclear. Converting a network to a NGN was much discussed internationally some years ago where the motivation was to reduce costs by simplifying the network, to make IP services easier to deliver end-to-end and to permit fixed and mobile services to converge on each other. However, it became much

less popular before it was widely adopted and operators preferred to invest in fixed broadband using ADSL and in mobile broadband with 3G systems instead. Moreover, in the specific case of Albtelecom, the network must already be fairly simple (as it has fewer than 300,000 subscribers) and is unlikely to provide convergence between fixed and mobile services while Albtelecom and Eagle remain separate legal entities. Albtelecom regards wholesale service provision as having major potential, perhaps because the networks of the regional operators are fragmented and use IP in ways that will lead to efficient interconnection with the Albtelecom NGN.

In the years after privatisation, some Albtelecom subscribers moved to alternative operators which could compete with Albtelecom prices and quality of service. Between 2008 and 2009 Albtelecom gained about 29,000 fixed telephony subscribers (easily the biggest increase in recent years), but between 2009 and 2011 it lost 34,000 subscribers. The ministry suggests that Albtelecom has no real interest in expanding fixed telephony penetration which at 12 per cent remains far below the EU average of 45 per cent. Indeed, Albtelecom remarks that business services and broadband are still promising, with the implication that fixed telephony to residential customers is not.

After 2008, the Albtelecom revenues from fixed services first rose and then fell as Albtelecom first gained and then lost subscribers. The revenues of its competitors also first rose and then fell over that period, suggesting that competition intensified as there were slightly more subscribers in 2010 than in 2008. Albtelecom competes with several regional operators that offer comparable tariffs and with national operators that can offer triple play packages such as ASC (sometimes branded "Tring") and AMC.[45] These competitors seem remarkably buoyant.

As fixed broadband penetration is 5 per cent in Albania and 27 per cent in the EU on average, there probably is scope for increasing fixed broadband penetration among the existing fixed telephony subscribers. Whether Albtelecom retail services will benefit from this is unclear - between 2010 and 2011 the number of fixed broadband subscribers rose from 120,000 to 140,000 but the number of those subscribers who took Albtelecom services fell from 70,000 to 60,000.[46] Albtelecom attributes its loss of subscribers to changes in its tariffs, whereby people started to be charged more when they exhausted their monthly download quotas. In that period there were also decreases in tariffs and increases in speed (typically doubling, from 1-2 Mb/s to 2-4 Mb/s) and some other operators offered speeds "up to" 20 Mb/s which require more advanced ADSL equipment.

Eagle has established itself as the third provider of mobile telephony in Albania, with a market share rising year-by-year, apparently largely at the expense of AMC. It finds the cheap rates offered by Vodafone and AMC to closed user groups (clubs) difficult to emulate and it now faces a fourth operator. Neither it nor that fourth operator has yet bought a 3G licence.

[45] ASC offers fixed telephony, fixed broadband and fixed television. AMC offers fixed telephony, mobile telephony and mobile broadband; it attracted 2 per cent of the national total number of subscribers in its first month of using its 2G network for fixed telephony.
[46] These figures exclude the 34,000 3G service subscribers who access broadband using USB modems.

Ratings

Table 19: Summary project evaluation

Identifier	Name	Description	Indicators					Overall view at this stage
			Fit with Bank policies	Fulfilment of project objectives	Financial perform-ance	Bank handling	Transitio n impact	
37836	Albtelecom	Expansion of fixed network, development of broadband capacity and construction of mobile network	+	+	+/-	+	+/-	Partly successful

Fit with Bank policies

The Bank investment in Albtelecom came after the privatisation but was closely connected with it. It aimed to increase penetration of fixed telephony and broadband and to establish a third provider of mobile telephony. All this is in keeping with the Bank strategy for Albania (though parts of that strategy, such as assisting with rural access or digital switchover, remain unfulfilled).

There was a concern expressed by the Bank at the time of project approval that Albtelecom would abuse the weak regulatory system to the advantage of Eagle but this does not seem to have happened. Indeed, Albtelecom suggests that the regulator does not treat small operators fairly and that Eagle is at a disadvantage compared with Plus in having no local investors.[47]

Turkish energy company Calik Enerji had approached the Bank and indicated that Bank financing was crucial in achieving privatisation. The government had also approached the Bank. Once closed, the transaction represented the largest ever loan to an organisation in Albania and foreign banks showed little enthusiasm for providing long-term financing in the country. The Bank could attract other finance to Albtelecom but even so the Bank and the Black Sea Trade and Development Bank remained the only two lenders on a stand-alone basis, with exposures above €15 million. Banks providing finance commented that the participation of the Bank was needed.

The privatisation of Albtelecom led to expansions of internet service and improvements in customer service. The company publicity remarks "until the company had new owners (in 2008) the number of internet subscribers was 1,250, the internet speed was 256 kb/s and the prices for internet were very high. The general infrastructure was old and there was no customer care mentality and even no department for this issue. There was no shop concept or corporate image for the whole country and the number of unqualified personnel was high." However, the ministry believed that their customer service was still poor and that penetration was too low. While there has been some growth in fixed telephony, it has been accomplished by the alternative operators and therefore although the privatisation of Albtelecom might have intensified competition, Albtelecom itself has not been the beneficiary. This can be seen as a favourable outcome in terms of developing the market, even if from the perspective of seeking to get a high return on investment it is not.

The advent of Eagle, which ended the duopoly of Vodafone and AMC, helped to make prices fall. The revenues from mobile services since 2008 have fallen by 44 per cent for AMC and 19 per cent for Vodafone because of competition and the reduction in mobile termination rates. Recently Eagle appears

[47] The particular complaint about large operators was that their low on-net tariffs deterred customers from using mobile number portability and switching to other operators, such as Eagle; rapid reductions in mobile termination rates would solve this problem, to the benefit of customers.

to have taken customers from AMC rather than Vodafone, possibly because of the high mobile termination rates, which lead to large differences between on-net and off-net tariffs. In any event, there has been a competitive spur: Average Revenue Per User (ARPU) from 2G services is believed to have fallen by at least 50 per cent between 2006 and 2010 and the figures of AKEP for 2G and 3G services imply that mobile market blended ARPU fell by 60 per cent between 2006 and 2011.

Albtelecom has invested heavily in the reconstruction of the Albtelecom network, IT systems for billing and customer relationship management and the deployment of the Eagle network. Parts of this investment have served to ward off competition from fixed operators with new networks and systems; the remainder has established a successful entry into the mobile market.

Financial performance

The total revenues of Albtelecom and Eagle rose from €83 million in 2008, through €123 million in 2009 to €124 million in 2010 but then fell to €110 million in 2011.[48] These figures are shown in Table 19 along with the corresponding projections from the business plan.[49]

Table 20: Revenues year-by-year

Year	Fixed service revenues		Mobile service revenues		Total service revenues	
	Projected value (€ million)	Actual value (€ million)	Projected value (€ million)	Actual value (€ million)	Projected value (€ million)	Actual value (€ million)
2008	100	78	3	5	103	83
2009	100	89	23	34	122	123
2010	101	84	32	40	133	124
2011	107	73	42	37	149	110

Therefore, three years after the time of project approval, the fixed service revenues were about 30 per cent below those projected, while the mobile service revenues telephony were about 10 per cent below those projected, despite having exceeded them in the three preceding years. Actual total revenues have slipped behind projected total revenues. The reasons for the slippage appear to be:

- the lag in the acquisition of fixed telephony subscribers, and the subsequent loss of subscribers
- the loss of fixed broadband subscribers consequential to the loss of fixed telephony subscribers
- the inability of the mobile telephony subscriber base to compensate for the low mobile market ARPU, despite its size.

The number of mobile telephony subscribers has greatly exceeded the business plan projections but revenues from those subscribers have not grown correspondingly. This rise in mobile subscriber numbers is a tribute to the capabilities of Eagle.[50] However, it has not offset the shortfall in fixed subscriber numbers because mobile market ARPU has been lower than projected. Vodafone and AMC have much

[48] These figures use the rate of depreciation of ALL against EUR used in the business plan; figures using the current conversion rate would be lower, especially in the earlier years.
[49] The sensitivity analysis in the business plan reduces the projections by up to 3 per cent but doing this makes relatively little difference to the gaps between the actual and projected figures.
[50] There might subsequently be a fall in the number of phones per mobile subscriber, which would appear as a fall in the number of mobile subscribers: as penetration reaches saturation, mobile termination rates fall and mobile number portability becomes faster and easier, subscribers will have fewer reasons to have multiple SIM cards.

higher ARPUs than Eagle – in 2011 these were respectively 2.6 and 1.6 times that of Eagle. This could be only partly attributed to 3G services because in 2009, before there were 3G services, their ARPUs were respectively 1.9 and 1.4 times those of Eagle. The Vodafone and AMC ARPUs are comparable with the projected ARPUs for Eagle but not with the actual ones.

Table 21: Subscribers year-by-year

Year	Fixed telephony subscribers		Fixed broadband subscribers		Mobile telephony subscribers	
	Projected number (000)	Actual number (000)	Projected number (000)	Actual number (000)	Projected number (000)	Actual number (000)
2008	293	264	18	15	30	258
2009	313	293	52	53	271	601
2010	333	278	74	71	413	822
2011	347	259	92	60	524	1,110

The lag in fixed network development was due partly to delays in getting authorisation to build extra connections and partly to the restructuring of the operations. The main success of the company is the performance of Eagle, which has an experienced management team and a good quality national network.

Bank handling

The Bank has been instrumental in the success of the project and worked with the Albanian government for years to ensure that the privatisation of Albtelecom progressed. The first loan was granted to a state-owned company with a view to better prepare it for privatisation. The Bank remained neutral while maintaining contact with all major bidders until the preferred bidder was selected. It then enlisted the assistance of the Black Sea Trade and Development Bank to co-finance the project.

Transition impact

Increased competition

The project partly achieved its objective of increasing competition in telecoms. Through its fully-owned subsidiary Eagle, Albtelecom achieved all benchmarks related to mobile telephony. Penetration was 140 per cent (when the benchmark was 100 per cent) while the market share was 18 per cent (when the benchmark was 10 per cent). Most importantly, between 2006 and 2011 monthly ARPU blended across the mobile market fell from €10.80 to €4.70 (representing a 60 per cent decrease) on the basis of AKEP figures (when the benchmark was 30 per cent).

However, the 30 per cent decrease in interconnection tariffs from 2006 to 2010 was not achieved. There was a progressive decrease in interconnection tariffs by AKEP between 2007 and 2009. National interconnection tariffs decreased by 14 per cent and international ones decreased by 5 per cent in 2009, whereas a 20 per cent decrease had been projected in the business plan. In 2010 all interconnection tariffs increased by 50 per cent and international ones remained unchanged. AKEP justified this decision by referring to the difficult economic environment for operators and an investigation of the costs by Price Waterhouse Coopers.

Market expansion

The transition impact objectives at the time of project approval did not include one for expanding the market by increasing fixed telephony penetration. However, the original submission to the Bank in 2008 noted the potential for increases as Albania had the lowest penetration in south-eastern Europe.

Penetration has not increased greatly since then. In mid 2007 Albtelecom had about 256,000 fixed telephony subscribers, mainly in urban areas, and there was still unsatisfied demand, with a waiting list of about 45,000 potential subscribers. In 2009 the number of Albtelecom fixed telephony subscribers rose to 293,000 but by the end of 2011 it was only 259,000. Thus, when Albtelecom increased fixed telephony penetration after privatisation, other operators took the customers.

Before privatisation, by contrast, there was a large increase in the number of fixed telephony subscribers – between 1998 and 2007 the number increased by 235,000 (representing a 700 per cent increase) from 40,000 to 275,000. Because mobile telephony is now very popular, fixed telephony might never rise significantly further in Albania; it might even fall as it is doing in some, but not all, other countries nearby. However, in those countries it remains significantly greater than in Albania (30 per cent in the case of Moldova and 40 per cent in the case of Serbia), even where their GDPs per head and populations are comparable with those of Albania.[51] Therefore there might still be scope for increasing fixed telephony penetration.

Albtelecom had expanded the fixed telephony network greatly between 1998 and 2007. The plans of Turk Telekom and Çalik Enerji for the fixed network in 2008 appeared to aim at meeting demand from the waiting list not at stimulating take-up. As it turned out, although Albtelecom increased supply to meet this demand, other operators took the customers. An active approach of increasing demand, instead of the traditional passive approach of increasing supply typical of state companies, might have allowed continued growth of the fixed market. Such an approach is implicit in the business plan that projected having 410,000 fixed telephony subscribers by 2015.

More widespread private ownership

The privatisation was completed in 2008. The presence of strategic investors Turk Telecom and Çalik Enerji means that the private ownership of Albtelecom is not widespread. However, a structure with a strong strategic owner could be more advantageous at this stage than that offered by just widespread ownership by the public or by purely financial investors unfamiliar with the sector.[52]

Demonstrations of new replicable behaviour and activities

The project achieved its objective of demonstrating new products or processes. Albtelecom acted to:

- raise awareness of, and demand for, ADSL through its campaigns in 2009-10
- deploy fibre to compete with 3G services and let Eagle provide 3G services well
- propose bundles comprising fixed telephony, fixed broadband and mobile telephony
- include IP television in its business plan (with hesitation about launching the service because of the regulatory environment and depressed incomes)
- introduce new billing and customer relationship management systems.

The project did not achieve its objective of demonstrating successful restructuring. The new owners were to increase staff efficiency by lifting the ratio of fixed lines per employee from 115 in 2006 to 250 in 2012, which would still be low by international standards.[53] In 2010 there were 195 lines per employee but in

[51] For instance, over one year ending in 2011, in Macedonia fixed telephony penetration dropped by about two percentage points (to 20 per cent) while mobile telephony penetration increased by about twelve percentage points (to 106 per cent). Annex 5 contains other relevant figures.
[52] There might be some question about whether this objective was formulated correctly, as the nature of the privatisation was known at the time of project approval.
[53] There were 500 lines per employee at Magyar Telekom, 540 at Turk Telecom and 287 at Romtelecom.

2011 there were 174 lines per employee. The original target, of having 250 lines per employee in 2012, now seems unlikely to be attained.

Maintenance of transition impact

To expand fixed telephony penetration, or just to avoid further decline in its shared of the fixed telephony market, Albtelecom is likely to need further development especially if it does not offer IP television. Moreover, to keep its wealthier customers and match its competitors, Eagle will likely need to offer 3G services, all of which will require extra investment.

Findings

Incorporating trends in ICT market forecasts

Most of the countries of operations historically had low fixed telephony penetration rates. However, after the privatisation of the incumbents which traditionally provided fixed telephony services, the expected rise in fixed telephony connections did not always materialise as demand for fixed telephony was replaced by demand for mobile telephony. Correspondingly, the desired fall in employees per fixed line became more difficult to achieve.

When preparing projections and setting financial and operational benchmarks (including those for transition impact) the Bank should take account of shifts in demand experienced in comparable circumstances elsewhere. In particular, it should note the possibility of mobile telephony substituting for fixed telephony.

Supporting the consolidation of alternative operators

Though alternative operators can be remarkably buoyant they often lack economies of scale. Projects to consolidate alternative operators can bring about these economies of scale and thereby stimulate completion while having strong transition impact. However, consolidation should not be achieved by strengthening the positions of operators that are dominant in other markets.

The Bank should pursue projects aiming to consolidate alternative operators that are strong in different markets, either because they deliver different services or because they operate in different parts of the country.

Providing hands-on help in technical cooperation programmes

The staff of regulators and judges in commercial courts would benefit from acquaintance with practice elsewhere, especially to strengthen the enforcement of regulation. Topics for the staff of the regulator might include cost modelling and separate accounting, spectrum auction design, scrutiny of local loop unbundling and number portability processes. Topics for judges in commercial courts might include the consequences of delaying the execution of regulatory decisions.

The Bank should continue to support the staff of regulators and judges in commercial courts with training, such as through the Legal Transition Programme, focusing on effective monitoring and enforcement more than legislation.

People consulted

- Gjergi Gjinke, Director of the Cabinet, Ministry of Innovation and Information and Communications Technology
- Irena Malolli, Director of Electronic and Postal Communications Directorate, National Agency of the Information Society

- Piro Xhixho, Chairman, AKEP
- Zekai Özgün, Chief Financial Officer, Albtelecom and Eagle
- Ilir Zela, Chief Compliance Officer, Albtelecom and Eagle

Annex 7: Albania

The market

Table 22: Distribution of subscribers among operators (2011)

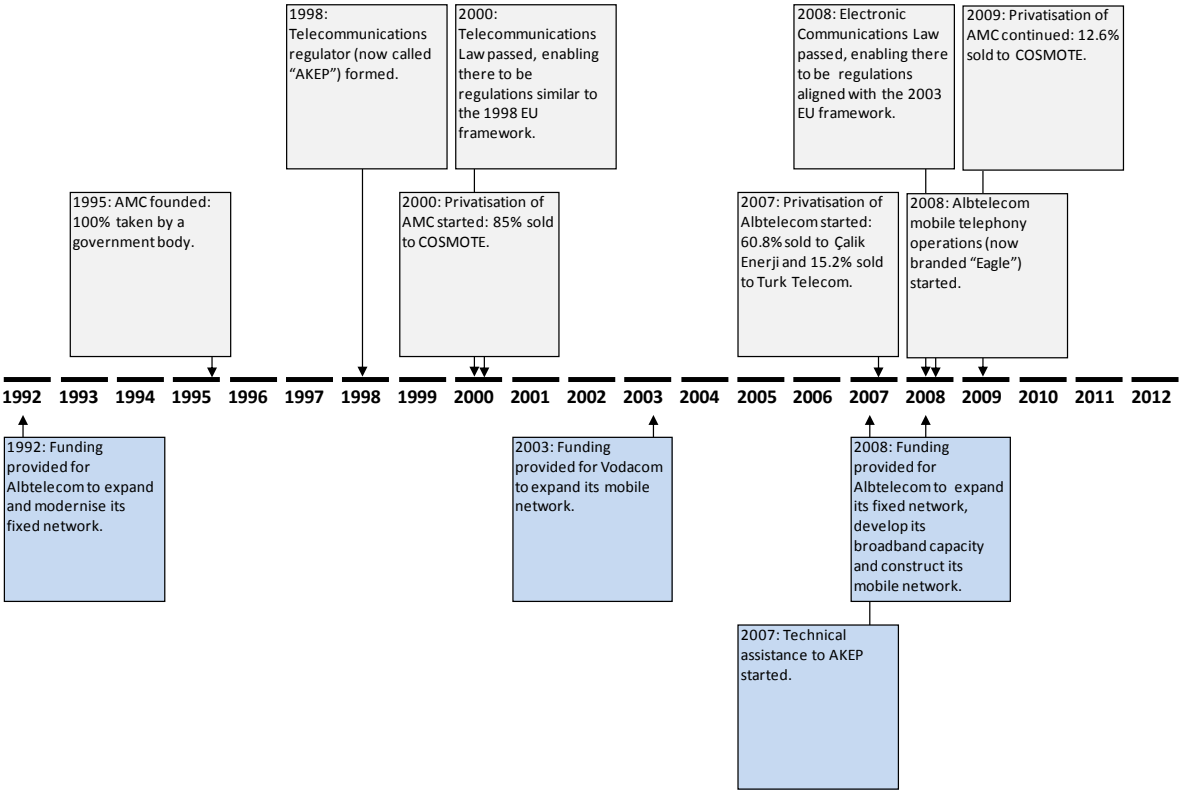
Operator	Fixed services						Mobile services			
	Telephony subscribers		Broadband subscribers		Television subscribers		Telephony subscribers		Broadband subscribers	
	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)
Albtelecom	259	76	60	43			1,110	21		
Abcom	27	8	29	21						
ASC	10	3	10	7	140					
Digitalb					300					
AMC	8	2					1,920	37	55	19
Vodafone							1,809	34	228	81
Plus							397	8		
Others	35	11	41	29						
Total	339	100	140	100		100	5,236	100	283	100

Table 23: Market trends (2011)

Indicator	Fixed services						Mobile services			
	Telephony subscribers		Broadband subscribers		Television subscribers		Telephony subscribers		Broadband subscribers	
	Number	Trend	Number	Trend	Number	Trend	Number	Trend	Number	Trend
Subscribers (000)	339	↑	140	↑↑		↑	5,236	↑↑	283	↑↑
Subscribers per 100 people	12	↑	5	↑↑		↑	189	↑↑	10	↑↑
Revenues (EUR 000)							271,139	↓↓		
Revenues per subscriber (EUR)							52	↓↓		
Outgoing call minutes (000,000)	728	↑					5,215	↑↑		
Outgoing call minutes per subscriber	2,148	↑					996	↑		
Total call minutes (000,000)	1,570	↑					11,121	↑↑		
Total call minutes per subscriber	4,632	↑					2,124	↑		

Investment in the sector rose from €73 million in 2010 to €74 million in 2011.

Figure 43: National developments and Bank involvements in telecoms (1992-2012)



The regulatory environment

Policy making

The Ministry of Innovation and Information and Communications Technology considers that it has enacted the 2009 framework, though parts of the policy paper prepared in 2010 have yet to be put into effect.[54]

A broadband policy was drafted in 2011 and a full strategy was due in late 2012. Other papers on the digital agenda and cyber security are also planned and users are requesting action plans, not mere statements of objectives. As Annex 5 confirms, Albania has a much more youthful population than other countries in south-eastern Europe but lags behind on all ICT development indices, so these action plans are desirable but could require external assistance.

Regulation

The regulator, the Electronic and Postal Communications Authority (AKEP), has gone through upheavals in recent years. All of the members of AKEP's steering board were replaced in 2008 and 2009. As the members both before and after replacement were those favoured by particular political parties, the independence of AKEP is open to doubt. Politically motivated appointments might be inevitable because the regulator should conform with government policy. Unfortunately, frequent changes can undermine the willingness to take action, for fear of being fired.

At one stage the effectiveness of AKEP was also limited by poor relations between the steering board and the operational units. The ministry maintains that the steering board members after replacement are working more efficiently than those before. Even so, some of the decisions taken by the steering board

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In the years after privatisation, some Albtelecom subscribers moved to alternative operators which could compete with Albtelecom prices and quality of service. Between 2008 and 2009 Albtelecom gained about 29,000 fixed telephony subscribers (easily the biggest increase in recent years), but between 2009 and 2011 it lost 34,000 subscribers. The ministry suggests that Albtelecom has no real interest in expanding fixed telephony penetration which at 12 per cent remains far below the EU average of 45 per cent. Indeed, Albtelecom remarks that business services and broadband are still promising, with the implication that fixed telephony to residential customers is not.

After 2008, the Albtelecom revenues from fixed services first rose and then fell as Albtelecom first gained and then lost subscribers. The revenues of its competitors also first rose and then fell over that period, suggesting that competition intensified as there were slightly more subscribers in 2010 than in 2008. Albtelecom competes with several regional operators that offer comparable tariffs and with national operators that can offer triple play packages such as ASC (sometimes branded "Tring") and AMC.[56] These competitors seem remarkably buoyant.

As fixed broadband penetration is 5 per cent in Albania and 27 per cent in the EU on average, there probably is scope for increasing fixed broadband penetration among the existing fixed telephony subscribers. Whether Albtelecom retail services will benefit from this is unclear - between 2010 and 2011 the number of fixed broadband subscribers rose from 120,000 to 140,000 but the number of those subscribers who took Albtelecom services fell from 70,000 to 60,000.[57] Albtelecom attributes its loss of subscribers to changes in its tariffs, whereby people started to be charged more when they exhausted their monthly download quotas. In that period there were also decreases in tariffs and increases in speed (typically doubling, from 1-2 Mb/s to 2-4 Mb/s) and some other operators offered speeds "up to" 20 Mb/s which require more advanced ADSL equipment.

Eagle has established itself as the third provider of mobile telephony in Albania, with a market share rising year-by-year, apparently largely at the expense of AMC. It finds the cheap rates offered by Vodafone and AMC to closed user groups (clubs) difficult to emulate and it now faces a fourth operator. Neither it nor that fourth operator has yet bought a 3G licence.

[56] ASC offers fixed telephony, fixed broadband and fixed television. AMC offers fixed telephony, mobile telephony and mobile broadband; it attracted 2 per cent of the national total number of subscribers in its first month of using its 2G network for fixed telephony.
[57] These figures exclude the 34,000 3G service subscribers who access broadband using USB modems.

Ratings

Table 25: Summary project evaluation

Identifier	Name	Description	Indicators					Overall view at this stage
			Fit with Bank policies	Fulfilment of project objectives	Financial perform-ance	Bank handling	Transition impact	
37836	Albtelecom	Expansion of fixed network, development of broadband capacity and construction of mobile network	+	+	+/-	+	+/-	Partly successful

Fit with Bank policies

The Bank investment in Albtelecom came after the privatisation but was closely connected with it. It aimed to increase penetration of fixed telephony and broadband and to establish a third provider of mobile telephony. All this is in keeping with the Bank strategy for Albania (though parts of that strategy, such as assisting with rural access or digital switchover, remain unfulfilled).

There was a concern expressed by the Bank at the time of project approval that Albtelecom would abuse the weak regulatory system to the advantage of Eagle but this does not seem to have happened. Indeed, Albtelecom suggests that the regulator does not treat small operators fairly and that Eagle is at a disadvantage compared with Plus in having no local investors.[58]

Turkish energy company Calik Enerji had approached the Bank and indicated that Bank financing was crucial in achieving privatisation. The government had also approached the Bank. Once closed, the transaction represented the largest ever loan to an organisation in Albania and foreign banks showed little enthusiasm for providing long-term financing in the country. The Bank could attract other finance to Albtelecom but even so the Bank and the Black Sea Trade and Development Bank remained the only two lenders on a stand-alone basis, with exposures above €15 million. Banks providing finance commented that the participation of the Bank was needed.

The privatisation of Albtelecom led to expansions of internet service and improvements in customer service. The company publicity remarks "until the company had new owners (in 2008) the number of internet subscribers was 1,250, the internet speed was 256 kb/s and the prices for internet were very high. The general infrastructure was old and there was no customer care mentality and even no department for this issue. There was no shop concept or corporate image for the whole country and the number of unqualified personnel was high." However, the ministry believed that their customer service was still poor and that penetration was too low. While there has been some growth in fixed telephony, it has been accomplished by the alternative operators and therefore although the privatisation of Albtelecom might have intensified competition, Albtelecom itself has not been the beneficiary. This can be seen as a favourable outcome in terms of developing the market, even if from the perspective of seeking to get a high return on investment it is not.

The advent of Eagle, which ended the duopoly of Vodafone and AMC, helped to make prices fall. The revenues from mobile services since 2008 have fallen by 44 per cent for AMC and 19 per cent for Vodafone because of competition and the reduction in mobile termination rates. Recently Eagle appears

[58] The particular complaint about large operators was that their low on-net tariffs deterred customers from using mobile number portability and switching to other operators, such as Eagle; rapid reductions in mobile termination rates would solve this problem, to the benefit of customers.

to have taken customers from AMC rather than Vodafone, possibly because of the high mobile termination rates, which lead to large differences between on-net and off-net tariffs. In any event, there has been a competitive spur: Average Revenue Per User (ARPU) from 2G services is believed to have fallen by at least 50 per cent between 2006 and 2010 and the figures of AKEP for 2G and 3G services imply that mobile market blended ARPU fell by 60 per cent between 2006 and 2011.

Albtelecom has invested heavily in the reconstruction of the Albtelecom network, IT systems for billing and customer relationship management and the deployment of the Eagle network. Parts of this investment have served to ward off competition from fixed operators with new networks and systems; the remainder has established a successful entry into the mobile market.

Financial performance

The total revenues of Albtelecom and Eagle rose from €83 million in 2008, through €123 million in 2009 to €124 million in 2010 but then fell to €110 million in 2011.[59] These figures are shown in Table 19 along with the corresponding projections from the business plan.[60]

Table 26: Revenues year-by-year

Year	Fixed service revenues		Mobile service revenues		Total service revenues	
	Projected value (€ million)	Actual value (€ million)	Projected value (€ million)	Actual value (€ million)	Projected value (€ million)	Actual value (€ million)
2008	100	78	3	5	103	83
2009	100	89	23	34	122	123
2010	101	84	32	40	133	124
2011	107	73	42	37	149	110

Therefore, three years after the time of project approval, the fixed service revenues were about 30 per cent below those projected, while the mobile service revenues telephony were about 10 per cent below those projected, despite having exceeded them in the three preceding years. Actual total revenues have slipped behind projected total revenues. The reasons for the slippage appear to be:

- the lag in the acquisition of fixed telephony subscribers, and the subsequent loss of subscribers
- the loss of fixed broadband subscribers consequential to the loss of fixed telephony subscribers
- the inability of the mobile telephony subscriber base to compensate for the low mobile market ARPU, despite its size.

The number of mobile telephony subscribers has greatly exceeded the business plan projections but revenues from those subscribers have not grown correspondingly. This rise in mobile subscriber numbers is a tribute to the capabilities of Eagle.[61] However, it has not offset the shortfall in fixed subscriber

[59] These figures use the rate of depreciation of ALL against EUR used in the business plan; figures using the current conversion rate would be lower, especially in the earlier years.
[60] The sensitivity analysis in the business plan reduces the projections by up to 3 per cent but doing this makes relatively little difference to the gaps between the actual and projected figures.
[61] There might subsequently be a fall in the number of phones per mobile subscriber, which would appear as a fall in the number of mobile subscribers: as penetration reaches saturation, mobile termination rates fall and mobile number portability becomes faster and easier, subscribers will have fewer reasons to have multiple SIM cards.

numbers because mobile market ARPU has been lower than projected. Vodafone and AMC have much higher ARPUs than Eagle – in 2011 these were respectively 2.6 and 1.6 times that of Eagle. This could be only partly attributed to 3G services because in 2009, before there were 3G services, their ARPUs were respectively 1.9 and 1.4 times those of Eagle. The Vodafone and AMC ARPUs are comparable with the projected ARPUs for Eagle but not with the actual ones.

Table 27: Subscribers year-by-year

Year	Fixed telephony subscribers		Fixed broadband subscribers		Mobile telephony subscribers	
	Projected number (000)	Actual number (000)	Projected number (000)	Actual number (000)	Projected number (000)	Actual number (000)
2008	293	264	18	15	30	258
2009	313	293	52	53	271	601
2010	333	278	74	71	413	822
2011	347	259	92	60	524	1,110

The lag in fixed network development was due partly to delays in getting authorisation to build extra connections and partly to the restructuring of the operations. The main success of the company is the performance of Eagle, which has an experienced management team and a good quality national network.

Bank handling

The Bank has been instrumental in the success of the project and worked with the Albanian government for years to ensure that the privatisation of Albtelecom progressed. The first loan was granted to a state-owned company with a view to better prepare it for privatisation. The Bank remained neutral while maintaining contact with all major bidders until the preferred bidder was selected. It then enlisted the assistance of the Black Sea Trade and Development Bank to co-finance the project.

Transition impact

Increased competition

The project partly achieved its objective of increasing competition in telecoms. Through its fully-owned subsidiary Eagle, Albtelecom achieved all benchmarks related to mobile telephony. Penetration was 140 per cent (when the benchmark was 100 per cent) while the market share was 18 per cent (when the benchmark was 10 per cent). Most importantly, between 2006 and 2011 monthly ARPU blended across the mobile market fell from €10.80 to €4.70 (representing a 60 per cent decrease) on the basis of AKEP figures (when the benchmark was 30 per cent).

However, the 30 per cent decrease in interconnection tariffs from 2006 to 2010 was not achieved. There was a progressive decrease in interconnection tariffs by AKEP between 2007 and 2009. National interconnection tariffs decreased by 14 per cent and international ones decreased by 5 per cent in 2009, whereas a 20 per cent decrease had been projected in the business plan. In 2010 all interconnection tariffs increased by 50 per cent and international ones remained unchanged. AKEP justified this decision by referring to the difficult economic environment for operators and an investigation of the costs by Price Waterhouse Coopers.

Market expansion

The transition impact objectives at the time of project approval did not include one for expanding the market by increasing fixed telephony penetration. However, the original submission to the Bank in 2008 noted the potential for increases as Albania had the lowest penetration in south-eastern Europe. Penetration has not increased greatly since then. In mid 2007 Albtelecom had about 256,000 fixed telephony subscribers, mainly in urban areas, and there was still unsatisfied demand, with a waiting list of about 45,000 potential subscribers. In 2009 the number of Albtelecom fixed telephony subscribers rose to 293,000 but by the end of 2011 it was only 259,000. Thus, when Albtelecom increased fixed telephony penetration after privatisation, other operators took the customers.

Before privatisation, by contrast, there was a large increase in the number of fixed telephony subscribers – between 1998 and 2007 the number increased by 235,000 (representing a 700 per cent increase) from 40,000 to 275,000. Because mobile telephony is now very popular, fixed telephony might never rise significantly further in Albania; it might even fall as it is doing in some, but not all, other countries nearby. However, in those countries it remains significantly greater than in Albania (30 per cent in the case of Moldova and 40 per cent in the case of Serbia), even where their GDPs per head and populations are comparable with those of Albania.[62] Therefore there might still be scope for increasing fixed telephony penetration.

Albtelecom had expanded the fixed telephony network greatly between 1998 and 2007. The plans of Turk Telekom and Çalik Enerji for the fixed network in 2008 appeared to aim at meeting demand from the waiting list not at stimulating take-up. As it turned out, although Albtelecom increased supply to meet this demand, other operators took the customers. An active approach of increasing demand, instead of the traditional passive approach of increasing supply typical of state companies, might have allowed continued growth of the fixed market. Such an approach is implicit in the business plan that projected having 410,000 fixed telephony subscribers by 2015.

More widespread private ownership

The privatisation was completed in 2008. The presence of strategic investors Turk Telecom and Çalik Enerji means that the private ownership of Albtelecom is not widespread. However, a structure with a strong strategic owner could be more advantageous at this stage than that offered by just widespread ownership by the public or by purely financial investors unfamiliar with the sector.[63]

Demonstrations of new replicable behaviour and activities

The project achieved its objective of demonstrating new products or processes. Albtelecom acted to:

- raise awareness of, and demand for, ADSL through its campaigns in 2009-10
- deploy fibre to compete with 3G services and let Eagle provide 3G services well
- propose bundles comprising fixed telephony, fixed broadband and mobile telephony
- include IP television in its business plan (with hesitation about launching the service because of the regulatory environment and depressed incomes)
- introduce new billing and customer relationship management systems.

[62] For instance, over one year ending in 2011, in Macedonia fixed telephony penetration dropped by about two percentage points (to 20 per cent) while mobile telephony penetration increased by about twelve percentage points (to 106 per cent). Annex 5 contains other relevant figures.
[63] There might be some question about whether this objective was formulated correctly, as the nature of the privatisation was known at the time of project approval.

The project did not achieve its objective of demonstrating successful restructuring. The new owners were to increase staff efficiency by lifting the ratio of fixed lines per employee from 115 in 2006 to 250 in 2012, which would still be low by international standards.[64] In 2010 there were 195 lines per employee but in 2011 there were 174 lines per employee. The original target, of having 250 lines per employee in 2012, now seems unlikely to be attained.

Maintenance of transition impact

To expand fixed telephony penetration, or just to avoid further decline in its shared of the fixed telephony market, Albtelecom is likely to need further development especially if it does not offer IP television. Moreover, to keep its wealthier customers and match its competitors, Eagle will likely need to offer 3G services, all of which will require extra investment.

Findings

Incorporating trends in ICT market forecasts

Most of the countries of operations historically had low fixed telephony penetration rates. However, after the privatisation of the incumbents which traditionally provided fixed telephony services, the expected rise in fixed telephony connections did not always materialise as demand for fixed telephony was replaced by demand for mobile telephony. Correspondingly, the desired fall in employees per fixed line became more difficult to achieve.

When preparing projections and setting financial and operational benchmarks (including those for transition impact) the Bank should take account of shifts in demand experienced in comparable circumstances elsewhere. In particular, it should note the possibility of mobile telephony substituting for fixed telephony.

Supporting the consolidation of alternative operators

Though alternative operators can be remarkably buoyant they often lack economies of scale. Projects to consolidate alternative operators can bring about these economies of scale and thereby stimulate completion, while having strong transition impact. However, consolidation should not be achieved by strengthening the positions of operators that are dominant in other markets.

The Bank should pursue projects aiming to consolidate alternative operators that are strong in different markets, either because they deliver different services or because they operate in different parts of the country.

Providing hands-on help in technical cooperation programmes

The staff of regulators and judges in commercial courts would benefit from acquaintance with practice elsewhere, especially to strengthen the enforcement of regulation. Topics for the staff of the regulator might include cost modelling and separate accounting, spectrum auction design, scrutiny of local loop unbundling and number portability processes. Topics for judges in commercial courts might include the consequences of delaying the execution of regulatory decisions.

The Bank should continue to support the staff of regulators and judges in commercial courts with training, such as through the Legal Transition Programme, focusing on effective monitoring and enforcement more than legislation.

[64] There were 500 lines per employee at Magyar Telekom, 540 at Turk Telecom and 287 at Romtelecom.

People consulted

- Gjergi Gjinke, Director of the Cabinet, Ministry of Innovation and Information and Communications Technology
- Irena Malolli, Director of Electronic and Postal Communications Directorate, National Agency of the Information Society
- Piro Xhixho, Chairman, AKEP
- Zekai Özgün, Chief Financial Officer, Albtelecom and Eagle
- Ilir Zela, Chief Compliance Officer, Albtelecom and Eagle.

Annex 8: Moldova

The market

Table 28: Distribution of subscribers among operators (2011)

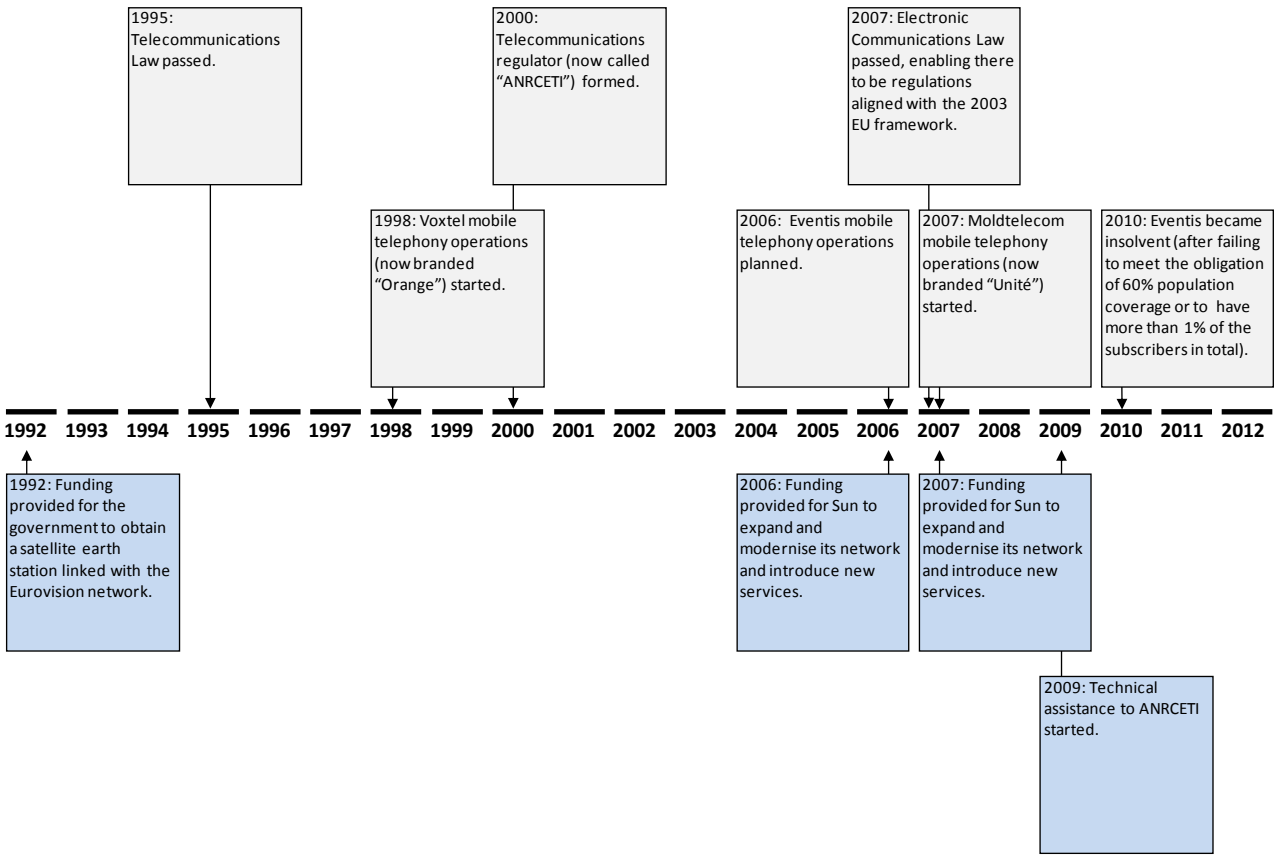
Operator	Fixed services						Mobile services			
	Telephony subscribers		Broadband subscribers		Television subscribers		Telephony subscribers		Broadband subscribers	
	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)
Moldtelecom	1,127	95	245	69	34	13	225	6	24	19
Sun	13	1	17	5	108	42				
Starnet	5	1	64	18						
Arax Impex	13	1								
Orange	12	1					2,130	57	79	63
Moldcell							1,360	37	22	18
Others	10	1	29	8	114	45				
Total	1,180	100	355	100	256	100	3,715	100	125	100

Table 29: Market trends (2011)

Indicator	Fixed services						Mobile services			
	Telephony subscribers		Broadband subscribers		Television subscribers		Telephony subscribers		Broadband subscribers	
	Number	Trend	Number	Trend	Number	Trend	Number	Trend	Number	Trend
Subscribers (000)	1,180	↑	355	↑↑↑	256	↑↑	3,715	↑↑	125	↑
Subscribers per 100 people	33	↑	10	↑↑↑	7	↑↑	104	↑↑	4	↑
Revenues (€ 000)	109,310	↓↓	45,003	↓	18,845	↑↑	239,589	↓	11,659	↑
Revenues per subscriber (€)	93	↓↓	127	↓	74	↑↑	64	↓	93	↑
Investments (€ 000)	40,975	↓↓			4,028	↑↑↑↑	75,129	↑↑		
Investments per subscriber (€)	35	↓↓			16	↑↑↑↑	20	↑↑		
Outgoing call minutes (000,000)										
Outgoing call minutes per subscriber										
Total call minutes (000,000)	3,322	↓					4,686	↑↑		
Total call minutes per subscriber	2,815	↓					1,261	↑↑		

Investment in the sector rose from €115 million in 2010 to €120 million in 2011.

Figure 44: National developments and Bank involvements in telecoms (1992-2012)



The regulatory environment

Policy making

The Ministry of Information Technology and Communications regards ICT as crucial to Moldova. This view appears acceptable to the government as a whole, although its implementation faces resistance from people with vested interests in the current position. For instance, border guards and customs officials dislike e-government services for border control and police officers dislike e-government services for traffic monitoring when many traffic fines are not collected by the government.[65] The ministry recognises that it is unable on its own to get every government body to implement the policy and it would like to enlist civil society in putting pressure on the government to use ICT.

The policy paper on digital Moldova is to have three pillars:

– Infrastructure (dealing with efficient spectrum management, infrastructure sharing and technology neutrality)

– Digital content (dealing with e-government, e-commerce and interesting applications such as transport timetabling)

[65] According to the transition indices in Annex 5, Moldova, Russia and Ukraine are perceived as being much more corrupt than most of the countries in South Eastern Europe (with Moldova the best and Ukraine the worst of these three). Their degrees of corruption also influence their ratings for judicial independence and global competitiveness.

– Capacity (dealing with incentives to computer literacy, such as requiring public servants to submit electronic forms, not paper ones).

Regulation

The regulator, the National Agency for Regulation in Electronic Communications and Information Technology (ANRCETI), considers that its role is not clear enough in some areas, such as spectrum policy and management, and has proposed to the ministry amendments to the Electronic Communications Law that would introduce clarity. The ministry, while recognising that amendments to the law are needed, is interested only in those amendments that bring the law into line with the 2009 framework.[66]

ANRCETI has also proposed amendments that would strengthen it as an institution by laying down responsibilities for Board members and employees. It would like the power of appointing the Director and the Deputy Director to be moved from the Prime Minister to Parliament which has the corresponding power for other government agencies.

ANRCETI also wishes to enforce its decisions more effectively. At present it can only either withdraw licences or impose fines of at most €500, so its decisions can be ignored. The incumbent operator, Moldtelecom, usually appeals against these decisions to the Administrative Court. Sun (the largest cable television operator and a client of the Bank) feels that ANRCETI is slow to investigate complaints – for instance, in one case where Sun complained that a competitor was blocking advertisements for Sun, ANRCETI failed to act before the practice of blocking ended for a completely different reason.[67]

Market access

All telecoms services have been liberalised. The electronic communications law is in conformity with the 2003 framework and most of the regulations needed to make it effective have been introduced. However, despite four attempts to privatise it, Moldtelecom remains a state enterprise and in the past the courts have been reluctant to challenge policies of Moldtelecom that conflict with decisions of the regulator.

ANRCETI has done several market analyses as part of its technical cooperation project with the Bank. Although it has designated Moldtelecom as having significant market power in fixed telephony and the mobile operators as having significant market power in the markets for call termination to their own networks, it is not satisfied with the resulting cost-oriented pricing modelling and separate accounting.

Moldtelecom has been very vigorous in defending its markets and its introduction of IP television, for example, might deserve scrutiny for possible cross-subsidy.

Rights of way for installing network infrastructure can be difficult to obtain because of obscurity in the procedures and divisions of responsibilities between different authorities. In principle Moldtelecom ducts can be used but they are sometimes "full". Also, unbundled lines can be difficult to obtain because the exchanges are also "full". These factors, and the cost of providing their own ducts, have led operators to favour aerial cables, despite the poorer quality of service that results. The high proportion of optical fibre connections for broadband (40 per cent) is testimony to the effectiveness of doing this in some circumstances.

The ministry considers that there is inefficient duplication of infrastructure and perhaps this is caused by lack of access to Moldtelecom facilities. More generally, the ministry wishes to have more infrastructure sharing and while this is not precluded by the law, it might need further legal measures to provide

[66] Annex 1 explains phrases relating to regulation and technology, such as "2009 Framework".
[67] Moldtelecom wished to advertise widely and was too powerful to be opposed.

competitive safeguards, permit competitive use of the infrastructures of the power companies and facilitate exploitation of the rights associated with roads and railways.

The three mobile telephony operators (Moldtelecom, Orange and Moldcell) also provide mobile broadband services. A fourth mobile operator, Eventis, operated for just over two years before going out of business and having its subscribers transferred to other operators. Moldtelecom has been successful by comparison, especially considering that it entered the mobile market at roughly the same time and offered cdmaOne instead of GSM.

The scope of universal service (provided by Moldtelecom) covers low tariffs for local calls and access to emergency services. So far tariffs have not been rebalanced, with the consequence that alternative operators focussed on residential subscribers (such as cable television operators) find competing with Moldtelecom difficult.[68] Sun maintains that the Moldtelecom tariff allowing 300 minutes of use per month for about €0.4 is less than the price that Sun pays for interconnection.

Bank operations

Strategy

The Bank strategy for Moldova approved in 2007 aimed to pursue investment opportunities in ICT through the following methods:

- providing direct financing to companies that were performing well
- investing alongside foreign strategic investors
- assisting the development of local companies that might attract foreign investment later.

The Bank strategy for Moldova approved in 2010 did not repeat or replace this aim. It noted, however, that the Medium-sized Loan Co-financing Facility, under which the Bank had made some funding available to Sun, had not been used widely and might need to be adjusted to fit local circumstances.

Technical cooperation

A technical cooperation project (in the Legal Transition Programme) lasted from 2009 to 2011. More than half of it was concerned with market analysis and the rest looked at spectrum management, number portability, consumer protection and universal service. ANRCETI found this all very useful and drafted regulations accordingly; it also made proposals to the ministry for amending the electronic communications law to take into account the 2009 EU directives and to adjust the powers of ANRCETI.

ANRCETI would now like further technical cooperation to assist with cost modelling and account separation. The Bank has suggested technical cooperation with the ministry to draw up the policy papers but not for cost modelling and account separation.

[68] If the tariffs of the incumbent operators for fixed telephony are not balanced, investment can be distorted: some prices (typically for residential customers and local calls) are lower than costs while others (typically for business customers and long-distance calls) are higher than costs, so the alternative operators concentrate on some markets to the exclusion of others.

Investments

Table 30: Bank telecoms investment projects (1992-2012)

Identifier	Name	Description	Signing date	Financing sector, type and value (€ 000)
	Eurovision	Design, supply and installation of earth station linked to the Eurovision Network by satellite	26 November 1992	Public debt 745
36919	**Sun Communic-ations**	Expansion and modernisation of cable network and introduction of new services, including broadband	13 June 2006	Private debt 186
37261	**Sun Communic-ations**	Expansion and modernisation of cable network and introduction of new services, including broadband	30 March 2007	Private debt 4,444
37865	**Sun Communic-ations**	Expansion and modernisation of cable network and introduction of new services, including broadband	30 March 2007	Private equity 1,945

Of these projects, the Sun ones were selected for further study. They alone were within the evaluation period.

The project reviewed

Background

The Bank provided an initial loan to Sun (or, more fully, Sun Communications) in 2006 but performed the main transaction in 2007. At that time Sun was already the largest cable television operator in Chişinău. Nationally the market was very fragmented and included a "grey" market of many operators.[69] Sun had an objective to acquire 80,000 extra cable television subscribers by taking over competitors in Chişinău and elsewhere and to expand and modernise the resulting networks so that other services (especially fixed telephony) could be offered. The competitors originally listed as take-over targets were not those operating in the grey market.

Sun changed its expansion strategy shortly after closing the financing transaction in 2007 and it made no major acquisitions in Chişinău. This is partly because following the announcement of financing by the Bank the acquisition targets started demanding excessive prices, but is mainly because the Anti-Monopoly Commission stopped Sun from increasing its market share in Chişinău by taking over major competitors. This action was not foreseen at the time of closing the transaction despite Sun having already 56 per cent of Chişinău's cable TV market. Sun has therefore restricted its acquisitions to a handful of small cable television companies operating in the grey market, together with two larger ones (in Bălţi and Cahul).

Sun is now the third largest fixed broadband operator in Moldova, behind Moldtelecom and Starnet. It is also the second fixed telephony operator; however, its share of that market is small and is almost matched by Arax Impex and Orange. As such, it is likely to be overtaken by Starnet when fixed number portability becomes available.

[69] Operators in the grey market undercut the others, probably by using lower quality content capture and distribution techniques, some of which might not pay full attention to the property rights of the content-holders. In the opinion of Sun, they are not very scrupulous in maintaining and reporting records of their subscriber numbers and revenues for tax purposes.

The high proportion of apartment blocks, together with the low labour costs and the use of aerial cables, makes network deployment relatively cheap. However, it is not without its problems – Sun maintains that some landlords will create difficulties about having Sun cables if they already have Moldtelecom or other operators present.[70] Nevertheless, Sun is prepared to consider expanding its network to other cities if there are many apartment blocks and there is optical fibre from Orange or Moldcell for connection to the digital television platform in Chişinău.[71] Sun is not willing to enter rural areas, where the population is falling.

Typically Sun has acquired assets, not companies. The companies themselves are small, with perhaps 2,000 subscribers each, and have been operating in a grey market with scant attention to intellectual property rights or to keeping payment records for tax purposes. Sun has introduced charging and billing systems to them and reconstructed their networks by replacing those parts that had low quality or could not support triple play service bundles. Alhough switchover to the new networks is disruptive and irritating, ultimately subscribers appreciate the improvements and are willing to pay higher prices than they paid before.

Ratings

Table 31: Summary project evaluation

Identifier	Name	Description	Indicators					Overall view at this stage
			Fit with Bank policies	Fulfilment of project objectives	Financial perform-ance	Bank handling	Transition impact	
36919 37261 37865	Sun Communic-ations	Expansion and modernisation of cable network and introduction of new services, including broadband	+/-	+/-	-	+/-	+	Partly successful

Fit with Bank policies

The company appeared to be performing well at the time of closing the transaction. This investment meant the Bank appeared to be assisting the development of a local company that in due course might attract foreign investment. In that respect, the project was in line with the Bank strategy for Moldova.

However, the premise underlying the investment, that Sun would build a strong competitor to Moldtelecom in fixed telephony and broadband by acquiring competitors in Chişinău and elsewhere, was not obviously in line with the Bank policy of fostering competition as Sun already had a high market share in Chişinău. Given the Bank policy, allocation of 40 per cent of project investment funds for acquisitions in Chişinău, while Sun already had 56 per cent of Chişinău's cable TV market might have been inappropriate, even if the Anti-Monopoly Commission had not stopped Sun from making them.[72]

Sun required investment to support growth but it had never attracted long-term commercial financing of the sort that the Bank could provide and that would be easier to get from other sources if the Bank was

[70] The extensive use of aerial cables is also counter to the environmental policies adopted by the Bank in project evaluations

[71] Until modernisation, Sun had a low quality microwave backbone, not an optical fibre one.

[72] This is so even if the market considered is the fixed television market, not the narrower cable television market: several years after decision of the Anti-Monopoly Commission Sun still had the largest share of that market. However, rapid growth in the market share of Moldtelecom could change the position and make large acquisitions by Sun acceptable.

involved. Sun regarded the Bank as having the experience of the sector needed for the development of Sun and believed that the participation of the Bank in the project would limit the potential for abusive treatment from competitors. In those respects the participation of the Bank in the project was desirable.

Fulfilment of project objectives

Sun did not achieve the main objective of the project, which was the consolidation of the cable television market through the acquisition of many smaller cable television operators. This was partly due to the prices demanded by the acquisition targets once the financing by the Bank was announced but was mainly due to the decisions of the Anti-Monopoly Commission. That body considered the Sun market share to be high already and therefore take-overs of competitors with overlapping service areas could threaten competition.

As Sun was not able to make substantial acquisitions, most of the Bank financing was spent on expansion and modernisation. Sun added fixed telephony to its portfolio to provide triple play service bundles comprising fixed telephony, fixed broadband and fixed television. Doing this has had little effect on the fixed telephony market so far.[73] One reason for this is that Moldtelecom has not rebalanced its tariffs to make local calls more expensive.[74] Until rebalancing occurs, the business market might be more appealing to alternative operators (such as Orange) than the residential market. Sun, however, being a cable television operator, is focused on the residential market and does not have the systems in place that would let it address the business market properly.

The network modernised with the Bank financing lets Sun compete in the fixed broadband market more effectively. However, Sun does so selectively and does not aim to match the capacities of Moldtelecom and Starnet with their use of optical fibre.[75] Sun maintains that subscribers are now preferring the Sun offers because they recognise that they are unable to use the higher speeds effectively. Its strategy therefore is to focus on a mass market, which it can target with a triple play offer without competing service-by-service against the strongest competitors (Moldtelecom for fixed telephony and Starnet for fixed broadband).

Sun has boosted the fixed television market through its expansion and modernisation, both directly and indirectly. For instance:

- To reduce the risk of being acquired by Sun, some smaller cable television operators have come together in a consortium that has its own digital television platform.
- To limit the inroads on the fixed telephony and fixed broadband markets, Moldtelecom has introduced IP television.

Starnet, not Sun, was the first to introduce triple play service bundles and might be seen by Moldtelecom as a bigger threat than Sun. However, the technologies used by Starnet and Moldtelecom make their triple play offers very expensive and Sun can differentiate itself by targeting a mass residential market with a less expensive but lower capacity offering.

Other effects of Sun on the market might not be so benign – it has been accused by competitors of lowering its prices artificially in order to drive them out of business or into its arms and in 2007 it was even fined for this practice.

[73] However, making enough telephone numbers available for Sun and others to compete in the fixed telephony market necessitated closing the numbering plan.
[74] Another reason is that that fixed number portability has yet to arrive (though it will do so in 2013).
[75] For instance, the broadband speeds of Sun are typically "up to" 2 Mb/s or 5 Mb/s (for triple play offers at €4.6 or €12.7) while those of Starnet are "up to" 30 Mb/s (for double play offers at €11.8).

Overall, fixed television subscribers number 256,000 while fixed telephony subscribers number 1,180,000. Hence, even if Sun has all the addressable fixed television market, Moldtelecom could be four or five times as large. Improving LLU, FTTC and FTTP provision could therefore do more to develop the market than modernising the networks of fixed television companies.

Financial performance

In 2007, cumulative net profit between 2008 and 2012 was projected to be US$ 13.3 million; it was actually US$ 1.2 million. In three out of the four years between 2008 and 2012 the Debt Service Coverage Ratio (DSCRD) was below the required minimum of 1.5. Much of the shortfall can be traced to the failure to acquire a large cable television operator in Chişinău because the Anti-Monopoly Commission objected and an IP telephony operator because the technology was inadequate.

The value of the Bank equity is currently half of that invested. The exit horizon has been extended but the Bank is unlikely to recover all of its investment.

Bank handling

The Bank team correctly identified the strongest cable television and fixed broadband operator that could be supported to increase competition in the fixed telephony and fixed broadband markets dominated by the incumbent operator.

However, due diligence does not seem to have been thorough.[76] In particular, optimistic assumptions provided by Sun (especially about the acquisition of new companies) were not reviewed critically enough. In its scrutiny of the Sun assumptions, the Bank considered telecoms regulations but not competition policies. However, the fulfilment of the main project objective was prevented by an unforeseen decision of the Anti-Monopoly Commission rather than the telecoms regulator.

Deeper consideration of the competition law and understanding that a company already holding 40 per cent of the market (and 56 per cent in Chişinău) would probably be prevented from making further acquisitions in Chişinău except in places outside its serving areas, could have led the Bank to question the Sun assumptions and offer a different financing or fund allocation structure (40 per cent of project funding was allocated to acquisitions in Chişinău). Moreover, a different structure would probably have included quasi-equity (guaranteeing minimum return), rather than straight equity. This would have prevented the Bank from incurring substantial losses.[77] The case for straight equity involvement in a highly competitive and vulnerable market can be questioned further, as the Bank has successfully applied convertible loans to similar transactions, such as that with Orion in Serbia.

Nevertheless, the Bank team observed the main strategic problem fairly early and the Bank showed flexibility when Sun proposed a change of strategy. The team has also worked closely with the new chief financial officer of Sun, ensuring timely debt service and good reporting quality.

Moreover, the Bank commissioned a technical and business review in 2010 when the poor performance of Sun was becoming apparent. Arguably, if the Bank had no equity stake in the company such a review might have been impossible or ineffective.

Finally, the resident office banker has been a valuable Sun board member, providing guidance about sector-specific and financial issues.

[76] For instance, the papers relating to the transaction do not mention the suggestions that Sun was competing unfairly by lowering its prices artificially.
[77] As yet these losses are on paper only but a considerable improvement in the financial position of Sun is doubtful.

Transition impact

Increased competition

Sun is said to have had 35,000 internet subscribers in the middle of 2012, slightly overshooting the target of 30,000 set for 2013.[78] This was mainly due to the introduction of triple play service bundles. However the company was more successful in upgrading existing customers (+26 per cent ahead of the plan) than attracting new internet subscribers (3 per cent behind the plan).

Market expansion

The transition impact objectives at the time of project approval included increasing competition by increasing the number of Sun cable television subscribers. This objective is better seen as one for expanding the market instead of one for increasing competition because if Sun were to increase its number of subscribers just by increasing its share of an unexpanded market beyond its existing 40 per cent it would decrease competition.

In fact Sun has not reached the number of cable television subscribers planned – it now has about half as many subscribers as planned (108,000 instead of 220,000) even though it has nearly doubled its initial subscriber base of 65,000 at the time of project approval. This shortfall was caused not just by the failure to acquire several smaller cable television companies but also by the underestimation of competition. For instance, according to the ANRCETI annual report for 2011:

- For fixed telephony, Sun was marginally ahead of Arax Impex and Orange in terms of numbers of subscribers but it was probably well behind Orange in terms of revenue, because the Orange fixed line service is only for businesses. Sun appeared to be growing faster than the others.
- For fixed broadband, Sun was behind Starnet by a factor of almost four and Starnet was behind Moldtelecom by a factor of almost four in terms of numbers of subscribers. Sun's market share rose in 2011 but had essentially halved since 2007, though of course the market had grown since.
- For fixed television, Sun was ahead of Moldtelecom by a factor of three in terms of numbers of subscribers but it was ahead by a factor of only two in terms of revenue. Sun appeared to have lost about 20 per cent of its subscribers to Moldtelecom since 2010.

The project did not achieve its objective of consolidating the cable television sector. Sun was able to acquire only few small companies, together with two larger ones in Bălţi and Cahul. These acquisitions have not made any significant impact on its subscriber base and its financial performance. Sun was not able to acquire some other companies because the prices for them were excessive or the Anti-Monopoly Commission expected the resulting market share to be too high.

Demonstrations of new replicable behaviour and activities

The project achieved its objective of demonstrating new products or processes. Sun modernised its technology and introduced a new product in the form of triple play service bundles. By introducing a new product Sun helped to maintain some competitive pressure in the fixed telephony and fixed broadband markets which otherwise would be entirely dominated by the incumbent operator (and Starnet, in the case

[78] However, this claim of having 35,000 internet subscribers is difficult to reconcile with the figures provided by ANRCETI. The ANRCETI annual report gives the figure as 17,000 for the end of 2011 and 11,000 for the end of 2010. The market grew by 32 per cent in 2010-11 so the Sun share actually fell slightly.

of fixed broadband). It might also have hastened the entry of Moldetelecom and Starnet into the fixed television market – this in itself would be a noteworthy transition impact, even if unwelcome to the investors in Sun.

Improved standards for corporate governance and business conduct

The project achieved its objective of improving standards for corporate governance and business conduct. Sun successfully introduced audits to IFRS and produced annual and three-year business plans.

Sustainability of transition impact

The risk to transition impact remains high. Sun abandoned its plans to take over smaller cable television operators. It now expects growth in subscriber numbers to come from market growth rather than acquisitions. However, market growth based on the offer of triple play service bundles has proved only partly successful so far. The market remains highly price sensitive while Sun promotes its services stressing quality of service and convenience (delivery of all three services by one supplier, payment of one bill, and so on).

There is some anecdotal evidence that the company has an option of attracting mainly young and upwardly mobile professionals (still not a large group in Moldova), although its responsiveness and quality of service have not always been to a high standard. The introduction of triple play service bundles by Moldtelecom could erode the Sun market share quickly and jeopardise the transition impact achieved – in 2010-11 alone, Moldtelecom appears to have captured 20 per cent of the fixed television subscribers of Sun.

Findings

Promoting the use of ICT by small and medium-sized enterprises and households

Supply-side investment in ICT infrastructure needs to be supported by demand-side use yet in many countries broadband availability exceeds broadband take-up, for businesses as well as households. Bank clients, whether governments or businesses, can promote ICT use through e-government and other programmes. In all countries, use is likely to be higher for younger people so paper-based counterparts to ICT applications will be needed for some years.

The Bank should use projects in other sectors to encourage investments in ICT, particularly, projects with small and medium-sized enterprises could have transition impact objectives of demonstrating ICT applications and projects with public clients (such as municipalities) could include well-designed programmes to extend the breadth and depth of broadband use.

Strengthening competition in one market without weakening it in another

Consolidation can strengthen competition to a powerful company but it might also make the consolidating company too powerful in a different market. In particular, fixed broadband and fixed television companies often have smaller addressable "home" markets than do fixed telephony incumbent operators so by consolidating to strengthen competition in fixed telephony they run the risk of becoming dominant in their "home" markets.

The Bank should prioritise clients that can achieve economies of scale and scope without expanding in markets where they are already in danger of becoming dominant.

Reducing risk in highly competitive markets

Cable television companies and internet service providers operate in highly competitive markets and remain exposed to many risks, such as changes in technology and regulation. Straight equity financing is vulnerable; quasi-equity with a minimum return for the Bank (and, correspondingly, a maximum return) is often more suitable.

When financing operations in highly competitive and risky markets, particularly with smaller telecoms operators, the Bank should first consider providing quasi-equity or subordinated debt rather than straight equity.

Taking account of all relevant laws and policies

Sectors such as ICT have their own specific laws and regulations but there are also general laws and regulations that apply to all sectors. For instance, in many countries there are specific regulations governing telecoms companies that have become dominant in their markets but stopping companies from becoming dominant is a matter for general competition law.

When conducting due diligence the Bank should consider the effects of all the relevant laws and policies (and all the EU legislation and WTO expectations that might influence future laws and policies), not just the sector-specific ones. In particular it should consider competition rules in projects involving company acquisitions.

Reconciling public information policies with confidentiality of financing

A recurrent problem for Bank clients is that the prices of acquisition targets rise if the clients are known to have Bank financing. This particularly affects projects in which the Bank financing is intended to support acquisitions shortly after the projects start. The acquisitions should be prepared and have agreed purchase prices before the financing is announced.

When setting up projects to facilitate acquisitions the Bank should ensure that, following the signing of the term sheets and the mandate letters, the clients enter into initial agreements with the intended acquisitions to lock the prices before the provision of the financing becomes publicly known.

People consulted

- Pavel Filip, Minister of Information Technology and Communications
- Dumitriu Parfentiev, Advisor to the Cabinet, Ministry of Information Technology and Communications
- Vitalie Tarlev, Head of International Cooperation and European Integration, Ministry of Information Technology and Communications
- Sergiu Sitnic, Director, ANRCETI
- Iurie Ursu, Deputy Director, ANRCETI
- Mariana Briescu, Head of Foreign Relations, ANRCETI
- Alexandr Scerbina, Deputy General Director, Sun
- Aliona Pidghurnaia, Finance Director, Sun
- Dhiae Mohammed Ali, Technical Director, Sun

Annex 9: Poland

The market

Table 32: Distribution of subscribers among operators (2011)

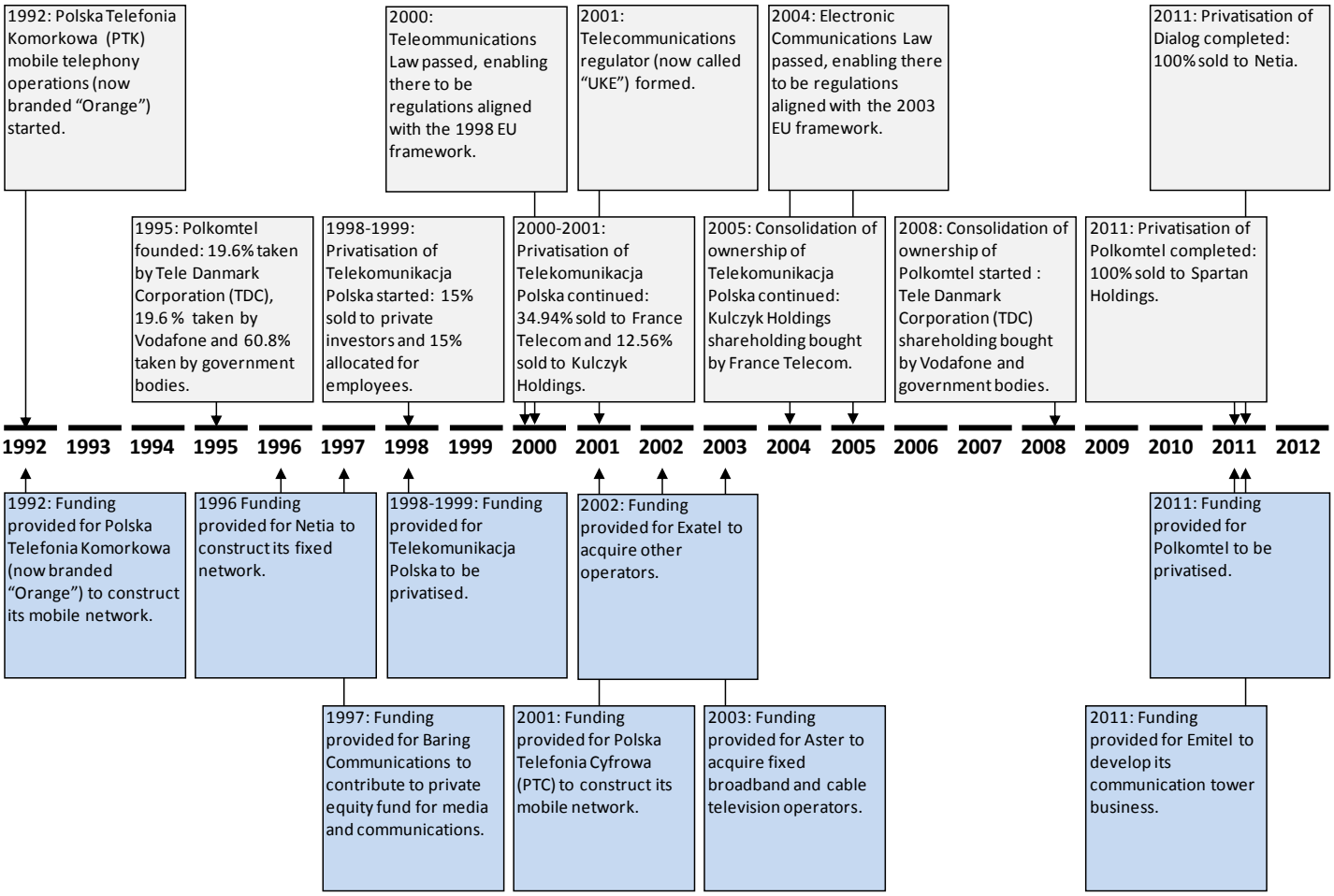
Operator	Fixed services						Mobile services			
	Telephony subscribers		Broadband subscribers		Television subscribers		Telephony subscribers		Broadband subscribers	
	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)
Orange	4,945	63	2,617	39	110	1	14,629	29	749	23
Netia	1,280	16	532	8	43	1				
UPC	365	4	594	9	1,493	13				
Vectra	182	2	332	5	804	7			20	1
MulitmediaPolska	118	1	374	6	724	6			26	1
Cyfrowy Polsat					3,600	33				
Cyfra+"n"					2,500	23				
Polkomtel							13,978	28	995	31
T-Mobile							13,878	28	726	22
P4							7,064	14	617	19
Others	1,010	14	2,949	33	1,726	16	551	1	96	3
Total	7,900	100	6,682	100	11,000	100	50,100	100	3,229	100

Table 33: Market trends (2011)

Indicator	Fixed services						Mobile services			
	Telephony subscribers		Broadband subscribers		Television subscribers		Telephony subscribers		Broadband subscribers	
	Number	Trend	Number	Trend	Number	Trend	Number	Trend	Number	Trend
Subscribers (000)	7,900	↓↓	6,682	↑↑	11,000	↑	50,100	↑	3,229	↑↑
Subscribers per 100 people	21	↓↓	26	↑↑	30	↑	131	↑	9	↑↑
Revenues (€000)	1,241,000	↓	3,810,000	↓			4,535,000	↓	730,000	↑
Revenues per subscriber (€)	157	↓	136	↓			91	↓	53	↑
Outgoing call minutes (000,000)	14,700	↓					63,800	↑		
Outgoing call minutes per subscriber	1,861	↓					1,273	↑		
Total call minutes (000,000)										
Total call minutes per subscriber										

The figures given include the Dialog contribution to Netia, which bought Dialog in 2011.
Investment in the sector fell from €408 million in 2010 to €254 million in 2011.

Figure 45: National developments and Bank involvements in telecoms (1992-2012)



The regulatory environment

Policy making

The Ministry of Administration and Digitalisation is responsible for electronic communications and the development of the digital economy in Poland. Among its tasks is improving internet communications between citizens and government institutions – for instance, at present a business can be registered through the Internet but the registration application requires a written signature or a costly digital signature.

The work of the ministry builds on a report on ten development challenges for Poland up to 2030.[79] This lists five potential contributions to meeting these challenges – developing conditions for speeding up investment; growing professional activity and mobility; boosting productivity and innovations; diffusing skills effectively at regional and social levels; and reinforcing social capital and state efficiency. The knowledge-based economy is central to these.

[79] These are the growth and competitive edge of the economy, demographic developments, high professional activity and adaptability of labour resources, adequacy of infrastructure, energy and climate safety, the knowledge-based economy and development of intellectual capital, solidarity and regional cohesion, enhancement of social cohesion, state efficiency and increase in social capital.

There does not yet seem to be clarity about how to meet the EU digital agenda targets for 2020.[80] Poland has a poor reputation for its broadband, because, for example, at the end of 2011:

– 17 per cent of the population had access to fixed broadband, ten percentage points below the EU average

– 58 per cent of the population used the internet, ten percentage points below the EU average.

In fact, as shown below, Poland is below average on all the EU indicators related to broadband penetration and internet usage (though it is not the worst performer on any of the indicators). The penetration and development figures in Annex 5 provide further evidence for this poor position; for instance, fixed broadband penetration in Poland is comparable with that in Russia or Serbia, and is outstripped by that in Latvia, Lithuania or Slovenia. Improving this position could be challenging, given that mobile broadband is no substitute for fixed broadband and the population is widely dispersed.[81]

Figure 46: Broadband penetration in Poland (2011)

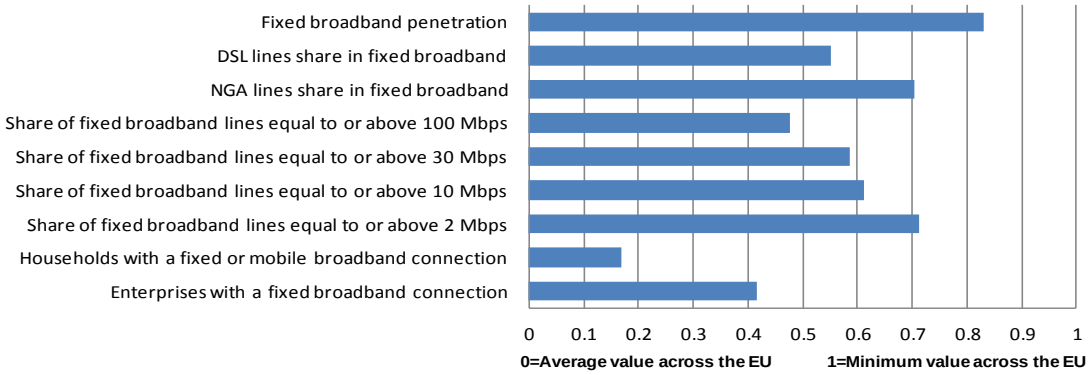
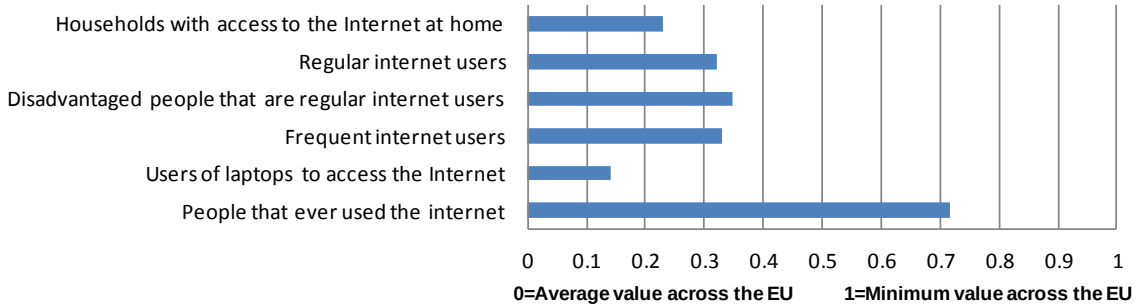


Figure 47: Internet usage in Poland (2011)



[80] These require 100 per cent broadband availability with 30 Mb/s download speeds and 50 per cent broadband take-up with 100 Mb/s download speeds.
[81] Annex 5 also shows that Latvia, Lithuania and Slovenia have lower population densities than Poland but higher proportions of the population in the three largest cities.

Regulation

The regulator, the Office of Electronic Communications (UKE), seeks to find new solutions to persistent problems. This has occasionally brought it into conflict with the EU, because, for example, it has not hitherto used LRIC or indeed, for the mobile network operator Aero2, any obvious costing technique.

Several of the tactics of the regulator have been directed toward aiding market entry. For instance, the mobile operator P4 was permitted to have asymmetric mobile termination rates, which at one stage were giving it a 20 per cent price advantage. It is to lose this advantage by 2013, when mobile termination rates will continue to fall on a glide path applicable to all operators. This glide path will use LRIC costing and reach low rates, to the annoyance of Polkomtel, the second largest mobile telephony operator and a client of the Bank. The scheme was the subject of extensive debate with the EU, because earlier versions of it might not comply with the 2009 Framework in various ways.[82]

In addition, four new mobile operators acquired spectrum in schemes that had very much lower reserve prices for new entrants than for the established operators. Three of the four of these operators floundered and were later acquired for somewhat more than these prices.

Market access

The incumbent operator. Telekomunikacja Polska (now branded "Orange") has remained the unchallenged leader of the fixed telephony market for years. However, its share of the market is decreasing. Some economies of scale are available to one of the alternative operators, Netia, which has expanded by acquiring Tele2, Dialog and Crowley Data and aims to extend its regional network.

As the incumbent operator implemented regulatory obligations tardily or insufficiently, the regulator considered functional separation as a remedy. However, after discussions in 2009 the regulator accepted a voluntary agreement instead, which intended to allow alternative operators access on non-discriminatory terms to wholesale services from the incumbent operator until 2013.[83] The European Commission and the Body of European Regulators for Electronic Communications (BEREC) had "serious doubts" whether the agreement justified a further proposal by the regulator, which was in effect a "regulatory holiday" for wholesale optical fibre access intended to encourage investment and improve broadband penetration[84].

Three mobile operators (Orange, Polkomtel and T-Mobile) have been in the market for many years.[85] The fourth, P4, has now joined them, successfully in terms of numbers of subscribers though it uses roaming on the Polkomtel network to ensure national coverage. Three others (Centernet, Mobyland and Aero2) entered the market but were unsuccessful. They were then acquired by the person that is now the main investor in Polkomtel and Cyfrowy Polsat, which is a digital satellite television operator. There are sixteen Mobile Virtual Network Operators (MVNOs), including Cyfrowy Polsat and four others using the Polkomtel network, but none of them is very large.

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[82] In particular, mobile termination rates should be set according to the costs of an efficient operator (not the costs incurred by the regulated operators), the convergence of mobile termination rates to one level should be finished in 2012, and market entry and infrastructure costs must not be borne by competitors. The scheme now chosen in Poland achieves successive reductions of 33 per cent and 48 per cent in 2013.

[83] In this agreement, the incumbent operator was required to freeze its wholesale prices until 2012, upgrade 1.2 million broadband lines within three years, separate its relevant wholesale and retail IT systems, withdraw hundreds of pending court cases and accept that wholesale prices would be determined on a cost-plus basis rather than a price-minus one.

[84] In this proposal, the incumbent operator could offer wholesale optical fibre access (to buildings) for which the prices were not cost-oriented and for which the non-discrimination obligations were not monitored closely.

[85] However, their names have changed: Orange used to be PTK Centertel and T-Mobile used to be PTC, while Polkomtel uses the brand "Plus" and P4 uses the brand name "Play".

In 2011 the four mobile operators were fined €27 million by the Office of Competition and Consumer Protection for limiting competition in the market. In a tender to provide wholesale mobile television services the operators exchanged sensitive information and agreed public ways of opposing the bid of the ultimate winner. Bidding jointly had been approved by the Office of Competition and Consumer Protection in 2008.

Bank operations

Strategy

The Bank strategy for Poland approved in 2010 focussed on the energy sector, the financial sector, private-public partnerships and privatisation. It said nothing specific about ICT in general or telecoms in particular. However, it aimed to support the transfer of modern technologies and innovation (including ICT) and the knowledge-based economy.

Technical cooperation

There was no technical cooperation project with Poland in the Evaluation Period.

Investments

Table 34: Bank telecoms financing projects in Poland (1992-2012)

Identifier	Name	Description	Signing date	Financing sector, type and value (€ 000)
	Polska Telefonia Komorkowa (PTK)	Construction of mobile network	28 January 1992	Private debt 17,890
	Netia	Construction of fixed network	26 June 1996	Private debt 15,827
	Netia	Construction of fixed network	26 June 1996	Private equity 7,914
	Baring Communic-ations	Contribution to private equity fund for media and communications	05 December 1997	Equity 3,730
	Telekomun-ikacja Polska	Privatisation of fixed and mobile network operator	17 November 1998	Private equity 64,862
	Communic-ation and Information Technology Fund	Contribution to private equity fund for media and communications	02 June 1999	Private equity 3,981
	Telekomun-ikacja Polska	Provision of guarantee facility	30 November 1999	Private guarantee 30,000
	Polska Telefonia Cyfrowa (PTC)	Construction of mobile network	20 February 2001	Private debt 84,029
	Exatel	Expansion of network and acquisition of other operators	20 December 2002	Private debt 70,727
	Aster	Acquisition of fixed broadband and cable television operators	26 March 2003	Private debt 24,618
42735	**Emitel**	Development of communications tower business	2 June 2011	Private equity 9,463
42640	**Polkomtel**	Privatisation of mobile network	13 October	Private equity

Identifier	Name	Description	Signing date	Financing sector, type and value (€ 000)
		operator	2011	200,000

Of these projects, the Polkomtel one was selected for further study.

The project reviewed

Background

The project aimed to assist in privatising Polkomtel, a major mobile telephony operator that was controlled by four state-owned companies and Vodafone.[86] The main investor in the privatised company planned to exploit his existing, largely unused, infrastructure and spectrum holdings to form a network on which Polkomtel would offer HSPA and LTE services. Transition impact was expected from the privatisation of a major telecoms asset and the successful restructuring of the company, which would result in better shareholder governance and improved efficiency and profitability. The intentions included a significant restructuring of the labour force, with the removal of artificial divisions in the company, as well as early retirement and redundancy programmes. The infrastructure and spectrum holdings other than those of Polkomtel came partly from companies that the main investor had acquired.

The Bank equity stake of €200 million was alongside the equity stake of €1.0 billion of the main investor and debt of €3.3 billion from commercial banks.

Even though the main investor had already acquired three mobile operators (Centernet, Mobyland and Aero2), the Office of Competition and Consumer Protection permitted his acquisition of a fourth on account of the fact those three mobile operators had very small market shares. They did, however, have spectrum holdings which, when combined and put to effective use, could lead to the development of a new competitor. The use intended by the main investor is the development of the first LTE services in Poland. This will confer a "first mover" advantage but not a monopoly on Polkomtel and the associated operators. That "first mover" advantage might not last long as competitors might seek to use for LTE some of their existing spectrum holdings (following the EU policy of technology neutrality in spectrum use) or acquire new holdings in current and expected tenders. This might intensify competition in response to provocation by Polkomtel.

Polkomtel had been investing heavily in the years before privatisation. After two years of heavy investment in network infrastructure, capital expenditure decreased in 2010 (despite further investments in IT) due to a lower rate of network expansion and to more favourable terms from vendors. Capital expenditure is likely to stay at that lower level, with occasional perturbations. The LTE infrastructure will be paid for by the other companies of the main investor.

Polkomtel is now the second largest mobile telephony operator in Poland, behind Orange. It is also the largest mobile broadband operator. It might suffer in the future from having less buying power than its competitors in major international groups, Orange and T-Mobile.

[86] TeleDanmark Corporation (TDC) had been a founding shareholder but, after its acquisition by a consortium of private equity fundss, divested itself of its interests outside the Nordic region (in Poland, Latvia, Lithuania, Austria and Switzerland, for example). In the case of Polkomtel the shares were sold to the other shareholders, so the proportion in state ownership increased. Nonetheless, at the time only one of the four state organisations owning shares professed to have a long-term interest in Polkomtel.

Ratings

The project was signed only in October 2011, so this evaluation is purely a preliminary one. It may attain different ratings when it is fully evaluated in the future.

Table 35: Summary project evaluation

Identifier	Name	Description	Indicators					Overall view at this stage
			Fit with Bank policies	Fulfilment of project objectives	Financial perform-ance	Bank handling	Transition impact	
42640	Polkomtel	Privatisation of mobile network operator	+/-	+	+/-	+	+	Successful

Fit with Bank policies

Polkomtel contributes to the development of the knowledge-based economy, in that a thriving competitive telecoms industry is essential for knowledge-intensive companies. In that respect, the financing of Polkomtel is in accordance with the Bank strategy for Poland.

The Bank investment in Polkomtel assisted with the privatisation but was not essential to it. Having an extra equity investor alongside the main investor made the entire financing package, with debt of €3.3 billion, more acceptable to the lenders. The main investor wished to limit the influence of any equity investor other than himself. The Bank would be a fairly passive participant and offered an acceptable flexible investment structure comprising quasi-equity with minimum return and maximum returns. For these reasons the main investor favoured the Bank as a co-investor.

Nevertheless, the degree of additionality is unclear, for the following reasons:

- the main investor had further funds of his own that he could have used in the transaction (though doing this might not have comforted the lenders)
- there were others besides the Bank who were prepared to have equity stakes alongside the main investor (though they did not reach agreement with him on the terms)
- the privatisation of Dialog (through its sale to Netia) occurred within months of the privatisation of Polkomtel without any involvement by the Bank; though this was a much smaller transaction (with a value of €236 million) it might indicate limits to the value of Bank involvement.

Fulfilment of project objectives

The project seemed to have as its sole project objective to facilitate the privatisation of Polkomtel, which it appeared to achieve.

The main investor had an overall strategy, which entailed:

- maintaining the market leadership of Polkomtel by keeping existing customers, supporting migration from prepaid services to postpaid services and increasing the differentiation between services
- capturing the bulk of the mobile broadband market over the next three-to-five years by being the first to provide a high-quality affordable service appealing to the mass market

- obtaining synergies in the deployment of a nationwide HSPA and LTE network by having a wholesale agreement (as Cyfrowy Polsat already does) under which Polkomtel would receive preferred access to another network of the main investor and would provide passive infrastructure and marketing
- restructuring the operations of Polkomtel to improve efficiency, lower costs, and enhance profitability by (for example) rationalising advertising expenses, overhauling IT systems and reducing staff numbers.

Implementing this strategy is not an objective of the project. Some caution might be needed when monitoring the implementation to ensure that it fits with Bank policies.

Financial performance

The overall financial performance has been declining slightly under continuing regulatory reductions in mobile termination rates. For the first half of 2012 the margin on EBITDA was 41 per cent (roughly the same as in 2011). In comparison with the first half of 2011, EBITDA, capital expenditure and revenues fell by 2 per cent, 44 per cent and 1 per cent respectively.[87] However, the project has perhaps been proceeding for too little time for these changes to have any significance.

Bank handling

During the privatisation process the Bank was approached by three out of the four bidders. The successful one had worked with the Bank before and appreciated its familiarity with the market.

Under the current plan (which might still be in a state of flux) the other assets of the main investor are the ones to develop the LTE infrastructure through the LTE company but the Bank has no stake in them except through its shareholding in Polkomtel (which is to own 49 per cent of some of them).[88]

The quasi-equity structure adopted diminishes risk for the Bank, but the risk in investing in a very large mobile telephony operator is much less than in some projects where the Bank has chosen straight equity financing, especially as the direction of EU regulation of mobile telephony has been clear for some time.

Transition impact

More widespread private ownership

The privatisation was completed in 2011. The presence of the main investor means that the private ownership of Polkomtel is not widespread; indeed, before the privatisation there were five main shareholders while now there are two. However, a structure with a strong strategic owner could be more advantageous at this stage than that offered by just widespread ownership by the public or by purely financial investors unfamiliar with the sector.[89]

The transition impact benchmarks for the project required that there be a successful privatisation of Exatel or Dialog by 2016. The privatisation of Dialog actually happened in 2011. However, there is no evidence

[87] The corresponding figures for the mobile services of Orange in Poland are 3 per cent, 12 per cent and 0 per cent. However, as there is no standard definition of EBITDA under IFRS, the figures might not be strictly comparable.
[88] The main investor has agreed that a 49 per cent shareholding in the LTE company will be transferred to Polkomtel, independent advisers will verify any non-market terms in agreements between the LTE company and Polkomtel or Cyfrowy Polsat, Polkomtel will have a call on the remaining shares in the LTE company in case of non-performance, and minority shareholders in the LTE company (including Polkomtel) will need to approve significant agreements made by the LTE company.
[89] There might be some question about whether this objective was formulated correctly, as the nature of the privatisation was known at the time of project approval.

that the privatisation of Polkomtel helped to bring this about by demonstrating the feasibility or desirability of privatisation.

Demonstrations of new replicable behaviour and activities

The project is on track to achieve its objective of demonstrating successful restructuring. The board has been replaced and the internal boundaries in the company are starting to be dismantled.

By the middle of 2012, Polkomtel had lost 180 people out of an intended 360 for that year. Some of the losses created vacancies that then needed to be filled.

Findings

Facilitating improvements in broadband penetration

The main development in telecoms over the next few years will be the growth of high speed broadband access, using wireline or wireless technologies. For rural and remote areas penetration will be increased by using various distinctive funding schemes, such as minimum subsidy auctions and market arrangements, such as municipal open access.

The Bank should aim to develop opportunities for financing broadband infrastructure with operators and local authorities.

Participating in the privatisation of telecoms companies

In many countries there are alternative operators that aim to enhance infrastructure or intensify competition and that can therefore be supported by the Bank but there are also still telecoms companies directly or indirectly owned by the state. When these companies are privatised, keeping debt at manageable levels will be central to financial success. As telecom remains a politically sensitive sector, strategic equity investors might be willing to invest only alongside co-investors who would be able to mitigate this risk, such as IFIs. This is mainly applicable to ETCs and intermediate transition countries but evidence suggests that such an approach might be also taken by investors in some advanced transition countries where gaps in the regulatory and legal environments still exist.

The Bank might play a role, even in advanced transition countries, by providing equity or quasi-equity alongside strategic investors during the privatisation of telecoms companies.

People consulted

- Marcin Cichy, Director, Department of Strategy and telecoms Market Analysis, UKE
- Andrzej Mikliński, Consultant, Department of Monitoring and Enforcement, UKE
- Wojciech Pytel, Management Board Member, Polkomtel

Annex 10: Russia

The market

Table 36: Distribution of subscribers among operators (2011)

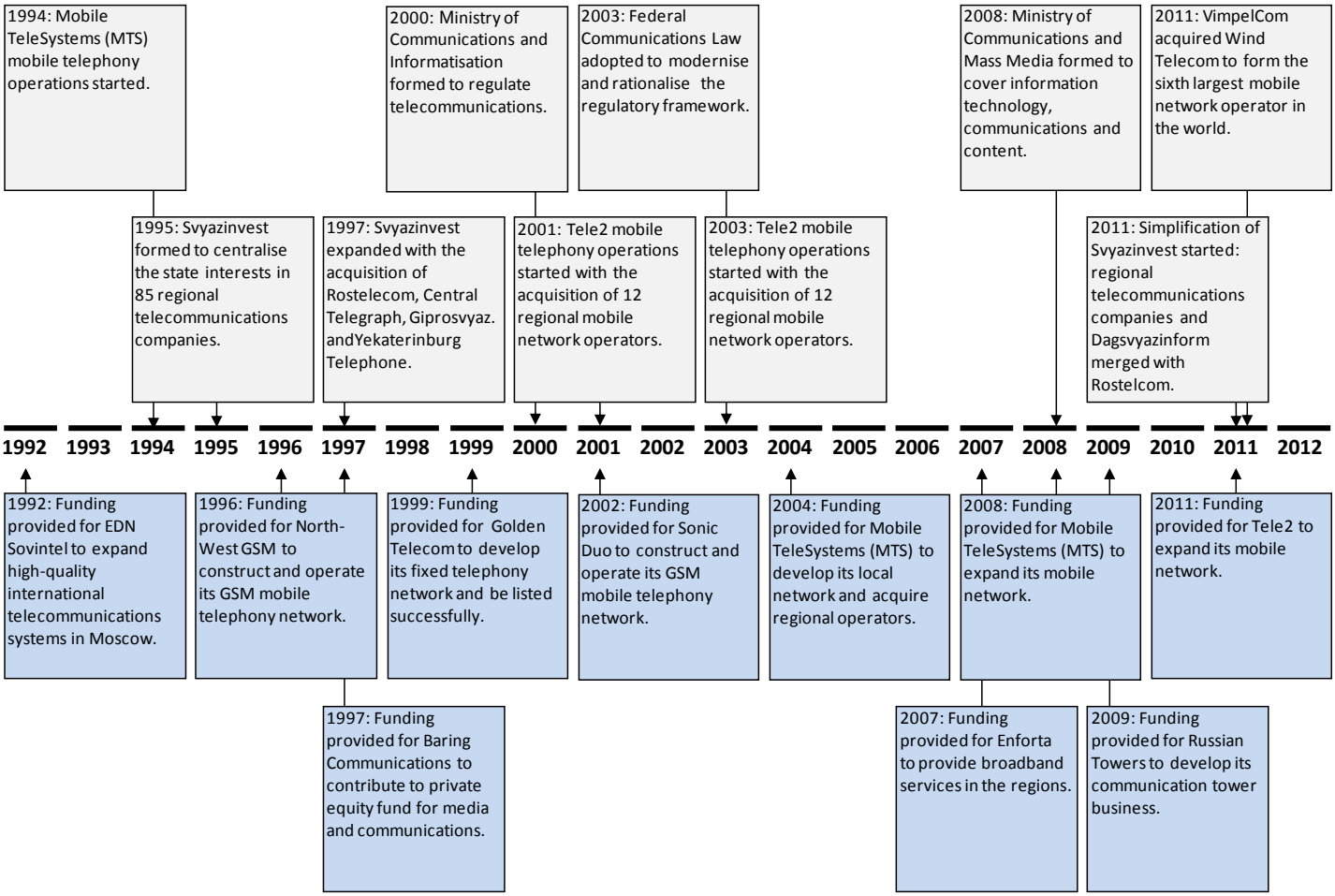
Operator	Fixed services						Mobile services			
	Telephony subscribers		Broadband subscribers		Television subscribers		Telephony subscribers		Broadband subscribers	
	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)
Rostelecom	28,500	63	7,629	40	5,800	25	13,945	6		
MTS	8,800	20	2,060	11	3,100	13	69,954	30		
VimpelCom			2,071	11	570	2	57,224	25		
MegaFon			450	2	150	1	61,613	27		
ER Telecom	265	1	1,899	10	1,747	8				
AKADO			774	4	1,080	5				
Tricolor					7,600	33				
Tele2							20,633	9		
MOTIV							2,224	1		
SMARTS							1,920	1		
Others			4,461	22	2,953	13	107	1		
Total	45,006	100	19,000	100	23,000	100	227,620	100	65,512	100

Table 37: Market trends (2011)

Indicator	Fixed services						Mobile services			
	Telephony subscribers		Broadband subscribers		Television subscribers		Telephony subscribers		Broadband subscribers	
	Number	Trend	Number	Trend	Number	Trend	Number	Trend	Number	Trend
Subscribers (000)	45,006	↓	19,000	↑	23,000	↑	227,620	↑	65,512	↑
Subscribers per 100 people	31	↓	13	↑	16	↑	157	↑	45	↑
Revenues (€ 000)	6,338, 000	↓	1,970, 000	↑	1,401, 000	↑	16,098,000	↓	1,918, 000	↑
Revenues per subscriber (€)	141	↓	104	↑	61	↑	71	↓	29	↑
Outgoing call minutes (000,000)										
Outgoing call minutes per subscriber										
Total call minutes (000,000)							725,000	↑		
Total call minutes per subscriber							3,185	↑		

The figures given include the SkyLink contribution to Rostelecom, which bought SkyLink in 2012.
Investment in the sector rose from € 4,193 million in 2010 to €6,641 million in 2011.

Figure 48: National developments and Bank involvements in telecoms (1992-2012)



The regulatory environment

Policy making

The Ministry of Communications and Mass Media is responsible for IT, telecoms, broadcasting, spectrum allocation, posts, government information resources, publishing, printing and personal data processing. It administers the national postal system as well as national and international telecoms networks.

The information society programme aims to improve the ranking of Russia in terms of the level of development of ICT and the number of citizens who use state services in daily life. Between 2010 and 2020 it should increase the proportion of the population using e-government services from 11 to 85 per cent. The programme has four components:

- infrastructure (dealing with efficient spectrum management, the availability of telecoms and the development of posts)
- the information environment (dealing with the improvement of broadcasting and access to electronic content)
- security (dealing with control, supervision, threat prevention and the development of grids)

– the information state (dealing with e-government, e-commerce and applications in education, science, medicine, health and social care).

Regulation

The framework for regulation is partly the responsibility of the Ministry of Communications and Mass Media. The administration of regulation is partly the responsibility of the Federal Communications Agency and the Federal Service for the Supervision of Communications, Information Technology and Mass Media, which are subordinate bodies of the Ministry of Communications and Mass Media. However, several other agencies are involved.[90]

The main state telecoms assets are held by the Federal Agency for State Property Management which is a subordinate body of the Ministry of Economic Development.[91] The assets collected in the state corporation Syvazinvest comprise controlling holdings in the national incumbent operator, Rostelecom, a fixed telephony and broadband operator in Moscow, Central Telegraph (now branded "Qwerty") and a network design company, Giprosvyaz. The intention is that all the components of Svyazinvest will be combined into Rostelecom. As part of this process in 2011 and 2012 various regional operators and SkyLink were acquired by Rostelecom, which has become much more than a long distance operator.

There are more than 1,000 companies licensed to offer communications services. Access to fixed telephony and broadband is improving, particularly in urban areas, but the demand for fixed telephony has not been fully met, and the services are still outdated and inadequate in rural areas. Mobile telephony is available in many areas and mobile broadband is available in some areas. Penetration varies greatly between one region and another, as well as between urban and rural areas – fixed telephony penetration is 59 per cent in Moscow and 1 per cent in Chechnya; fixed broadband penetration is 23.4 per cent in Moscow and 0.1 per cent in Chechnya; and mobile telephony penetration is 223 per cent in Moscow and 118 per cent in Chechnya.

Market access

Most services are open to competition by obtaining suitable licences but interconnection can still be difficult to achieve. There is also no Local Loop Unbundling (LLU) so unless they are essentially local incumbent operators like Moscow City Telephone System (MGTS), all alternative operators have to build their own infrastructure.

The licences that are granted are typically very specific and relate to particular regions, so an operator may need several licences in order to provide services. Moreover, there is as yet no general principle of technology neutrality in spectrum use – the technology used in a frequency band can be changed only if specific permission has been granted.[92] Spectrum allocation is complicated by the need to clear military uses out of civilian frequency bands.

[90] In particular, spectrum allocation is the responsibility of the State Commission for Radio Frequencies, which is an inter-ministerial body under the Ministry of Communications and Mass Media, retail and wholesale price control is the responsibility of the Federal Tariff Service, which is under the Prime Minister, and anti-competitive behaviour prevention is the responsibility of the Federal Anti-Monopoly Service, which is under the Prime Minister.

[91] The assets exclude, for example, the long distance operator Transtelecom owned by Russian Railways. It has 53,000 km of optical fibre laid alongside railway lines, but it also offers fixed broadband to selected buildings in 94 cities and in 2011 it won licences to provide WiMax in 20 cities.

[92] Specific permission is granted sometimes; for instance, SkyLink was permitted to replace CDMA2000 with UMTS, and Scartel was permitted to replace WiMax with LTE. Also, an official report of the Radio Research and Development Institute to the State Commission for Radio Frequencies in 2012 expressed strong support for technology neutrality in spectrum use. The State Commission for Radio Frequencies was expected to rule on the matter by the end of 2012 but did not do so.

Rules for number portability were devised in 2005 and the Federal Anti-Monopoly Service has been trying to introduce them since 2009. However, despite the urging of the government, the operators have failed to implement them, claiming that they would be expensive. There is now an expectation that they will be introduced in 2014. There has also been talk of reducing mobile termination rates and international roaming charges.

The main operators are Rostelecom, Mobile TeleSystems (MTS), VimpelCom and MegaFon. In recent years they have been expanding their service offerings and operating areas by acquiring specialised and regional operators with the aim of providing both fixed and mobile services and to strengthen their positions in Moscow and other regions. For instance, in 2011:

– Rostelecom gained control of the largest independent fixed television operator in the country (National Telecommunications) and two mobile network operators (Volgograd GSM and Orenburg GSM)

– MTS gained control of six fixed network operators (Comstar United TeleSystems, MGTS, Inteleca, Infocentr, Altair and TVT)

– MegaFon gained control of six fixed network operators (NetByNet, Web Plus, Nakhodka Telecom, ChebNet, Luchshe.Net and Yugratel).

Only VimpelCom stood aloof from this tendency for national expansion in 2011, though it had not done so in previous years. Instead, it preferred international expansion, in that it gained control of Wind Telecom to form the sixth largest mobile network operator in the world by subscriber numbers, with operations in 20 countries and 180 million subscribers.[93]

Digital trunk lines run from north to south and from west to east. Many are owned by Rostelecom but there are also infrastructure sharing deals whereby, for example, MTS gains access to the optical fibre owned by Rostelecom while Rostelecom gains access to the masts owned by MTS.[94] VimpelCom has a similar agreement about the joint building and rental of optical fibre in exchange for positions on MTS and MegaFon towers.

The government policy on Long Term Evolution (LTE) has been changing over time but has kept some common elements. For instance:

– In 2010 Rostelecom, MTS, VimpelCom and MegaFon formed a consortium to make suggestions for LTE development, at the instigation of the government. They did not invite other participants and proposed that the spectrum be shared between them; each would then invest €2.1 billion to install 20,810 base stations in 10,400 locations with more than 1,000 inhabitants each.

– In 2011 Rostelecom, MTS, VimpelCom and MegaFon agreed that Scartel (now branded "Yota") which was permitted to use its WiMax frequency band for LTE, would invest €1.5 billion to build LTE networks in 180 towns by the end of 2014 and would supply 20 per cent of the capacity to each of them. Subsequently Rostelecom and MegaFon said that they would

[93] For several years there were disputes between the shareholders Telenor and Altimo (which holds the telecommunications assets of Alfa) over the governance of VimpelCom. For instance, in 2012 Telenor purchased shares in VimpelCom from Weather Investments in connection with the Wind telecoms deal. The Federal Anti-Monopoly Service then opened a court case claiming that Telenor, as a company controlled by a foreign state, had broken the law by controlling an entity important for national defence and state security. After Altimo also purchased more shares, and once more had a larger shareholding than Telenor, the Federal Anti-Monopoly Service withdrew its court case.

[94] MTS claims to have 117,000 km of optical fibre, while Rostelecom claims to have 500,000 km.

become Mobile Virtual Network Operators (MVNOs) on the Scartel network, but MTS and VimpelCom said that they would jointly build their own network.

– In 2012 Rostelecom, MTS, VimpelCom and MegaFon won the tender for LTE (4G) spectrum; other bidders included Transtelecom, Summa Telecom and Tele2. These operators already have UMTS (3G) spectrum – in the case of Rostelecom through its acquisition of SkyLink and in the cases of MTS, VimpelCom and MegaFon through the tender of 2007.

Scartel itself is now merging with MegaFon, which has the same controlling shareholder.[95] The Federal Anti-Monopoly Service approved the merger but obliged the merged company to provide equal opportunities to all potential MVNOs. The Chief Executive Officer of Scartel is now a Deputy Minister of Communications and Mass Media.[96]

Bank operations

Strategy

The Bank strategy for Russia approved in 2006 aimed to:

– support the development of internet access and data communications

– promote the international and regional expansion of telecoms companies

– explore financing the development of satellite communications and navigation systems

– extend financing the development and distribution of content through cable television, IP television, cinemas and film studios.

The Bank strategy for Russia that was approved in 2009 aimed to promote regional development in various sectors, including telecoms.

Technical cooperation

There was no technical cooperation project with Russia in the evaluation period.

Previously the Bank, through the Legal Transition Programme, had advised the ministry on amendments to the law, to the extent of making presentations and answering queries from deputies, and thereby had helped to ensure that the amendments were adopted. However, another more recent project to encourage reform in universal service, licensing and interconnection policy was less successful and was ultimately cancelled.

[95] TeliaSonera, Altimo and AF Telecom, which were three main shareholders in MegaFon until 2012, had various disputes. Ultimately, through sales to AF Telecom and MegaFon itself, TeliaSonera reduced its stake and Altimo eliminated its staketelecoms . Altimo used some of the proceeds of its sale of its stake to purchase more shares in VimpelCom. AF Telecom became the controlling shareholder of MegaFon, just as, for example, Systema is the controlling shareholder of MTS. Among the other shareholders of MegaFon is the state-owned corporation Russian Technologies.

[96] AF Telecom was already reputed to have extremely good government contacts.

Investments

Table 38: Bank telecoms investment projects (1992-2012)

Identifier	Name	Description	Signing date	Financing sector, type and value (€ 000)
	EDN Sovintel	Expansion of high-quality international telecoms systems in Moscow	16 October 1992	Private debt 3,389
	Macomnet	Development and operation of telecoms transmission system	09 September 1993	Private debt 1,491
	Moscow GSM	Construction and operation of GSM mobile telephony network	18 August 1995	Private debt 16,514
	Moscow GSM	Development and operation of GSM mobile telephony network	18 August 1995	Private equity 8,257
	North-West GSM	Development and operation of GSM mobile telephony network	10 December 1996	Private debt 20,863
	Baring Communic-ations	Contribution to private equity fund for media and communications	05 December 1997	Private equity 1,243
	NTC	Expansion of fixed telephony services and GSM mobile telephony services	02 March 1999	Private debt 8,945
	Golden Telecom	Development of fixed telephony network and successful listing	30 September 1999	Private equity 19,569
	VimpelCom	Development of D-AMPS and GSM mobile telephony network and of Internet services	21 July 2000	Private equity 33,099
	Sonic Duo	Construction and operation of GSM mobile telephony network	30 November 2001	Private debt 16,511
	Sonic Duo	Construction and operation of GSM mobile telephony network	30 November 2001	Private equity 8,256
	NTC	Expansion of fixed telephony and GSM mobile telephony network services	30 December 2003	Private debt 3,727
35648	**Mobile TeleSystems (MTS)**	Development of local network and acquisition of regional operators	08 December 2004	Private debt 136,472
35892	**Enforta**	Provision of broadband services in the regions and cities	15 February 2007	Private debt 3,588
38180	**Enforta**	Provision of broadband services in the regions and cities	15 February 2007	Private equity 4,314
39439	**Enforta Expansion Phase I**	Provision of broadband services in the regions and cities	19 December 2008	Private debt 10,763
39576	**Mobile TeleSystems (MTS)**	Expansion and modernisation of mobile network	23 December 2008	Private debt 88,550
40497	**Russian Towers**	Development of communications tower business	21 December 2009	Private equity 7,424
42037	**Enforta Expansion Phase II**	Provision of broadband services in the regions and cities	20 December 2010	Private debt 10,677
42737	**Tele2 Russia**	Expansion of mobile network in the regions	17 June 2011	Private debt 47,454

Of these projects, Tele2 Russia was selected for further study.

The project reviewed

Background

The project aimed to assist in developing the network of Tele2 Russia, a major mobile telephony operator. The development of the network had previously been financed by loans from the parent company. The company planned to issue bonds and repay roughly half of these loans; the parent company would convert the rest of the loans into equity in Tele2 Russia. This capital restructuring would let the company fund expansion from operating cash flows (instead of loans from the parent company) and access to the local capital market. Having local bond holders might help the company to overcome political difficulties arising from its foreign ownership. Transition impact was expected from the support of network expansion in regions other than Moscow and the creation of the first bond issue on the local bond market by a foreign company other than a bank.

The Bank undertook to purchase at most 20 per cent or €100 million (whichever was the smaller) of a bond issue of up to €500 million. The bond issue in 2011 in fact raised €300 million. It was expected to be followed by others in 2011 but they were delayed by adverse market sentiment. It was followed in 2012 by two more, which together also raised €300 million. The proceeds were used to refinance loans and convert debt into equity.

Tele2 is the fourth largest mobile network operator in Russia, with licences in 43 regions that together have 62 million inhabitants (slightly more than 40 per cent of the population of the country). In 2001 it started its operations in Russia by acquiring companies in 12 regions – the most significant of these was Saint Petersburg.

Since then it has been able to obtain licences in other regions, many of which have very small populations and extremely low population densities.[97] Tele2 Russia now contributes 60 per cent of the subscribers and 28 per cent of the revenues of Tele2 in its countries of operations.[98]

In many of the regions of Russia Tele2 expects the market to grow because penetrations are still low, as are incomes, and it intends to switch in mature regions from raising subscriber numbers to improving subscriber quality. Doing this could require differentiators besides price leadership, such as marketing programmes, distribution channels or customer care.

To keep prices low, Tele2 keeps costs low by keeping incidental expenses small and having few employees. It has the reputation of being a fast-paced company, in which employees are encouraged to perform well.[99] Its ARPU (€5.4 per month in Russia in 2011) is roughly two thirds of that of its competitors; this is related to the disparity in incomes between Moscow (where Tele2 does not operate) and the rest of

[97] In particular, the six regions for which Tele2 obtained licences in 2011 (Kamchatskaya, Koryakskaya, Chukotskaya, Evreiskaya, Sakhalinskaya and Magadanskaya) have a combined population of 1.4 million. (slightly less than 1 per cent of the population of the country). Nonetheless Tele2 believes that 80 per cent or 90 per cent of the population in those regions lives in settlements that can be covered quite easily, and it expects to break even in four of the regions. At the time of applying for these six licences Tele2 applied for a further 14; though those licences went to competitors Tele2 considers that its success rate was reasonable.

[98] These countries are Sweden, Norway, Netherlands, Germany, Austria, Estonia, Lithuania, Latvia, Croatia, Kazakhstan and Russia. In many of these Tele2 aims to achieve price leadership, at least the second highest number of subscribers, at least 24 per cent Return On Capital Employed (ROCE), and, for a mobile operation with its own infrastructure, at least 35 per cent margin on Earnings Before Interest, Tax, Depreciation and Amortisation (EBITDA).

[99] In one of its countries of operation Tele2 was said (by a potential customer that had heard Tele2 describe its practices) to stress its employees to the point of exhaustion, at which point it fired them. This remark possibly referred to the sales staff, which Tele2 outsources in several countries.

the country including, to some degree, Saint Petersburg. Correspondingly, its margin on EBITDA (39 per cent in Russia in 2011) is five or ten percentage points below that of its competitors.

Tele2's low prices are attractive to customers, particularly its prepaid services. It aims to have small and medium-sized businesses as customers, as well as private individuals. However, it has very few large business customers and no customers in Moscow, where it relies on national roaming agreements.[100]

Tele2 considers that embarking on fixed communications in Russia would weaken its competitive advantage (low prices) in mobile communications, distract its management and be expensive when there are already four major competitors. However, it is interested in expanding by acquiring the small mobile network operators MOTIV and SMARTS.

Tele2 is not yet permitted to provide 3G or 4G services in Russia. It would like to provide 4G services, if necessary in the short term, by replacing GSM by LTE in one of its existing frequency bands, but it would need to be granted specific permission for this. The tender for 4G spectrum in 2012 related to national licences which arguably would be less suitable to Tele2 than some regional licences, which it expects to be issued for ten regions. Currently, outside Moscow and Saint Petersburg, 2G is enough as even in Saint Petersburg most of the Tele2 revenue comes from telephony not 2G data transmission. More generally, while acknowledging that regulation in Russia is complicated,Tele2 believes that there will be support for the role of regional operators that will allow for the provision of future-proof data services.

Ratings

The project was signed only in June 2011 so this evaluation is purely a preliminary one. It may attain different ratings when it is fully evaluated in the future.

Table 39: Summary project evaluation

Identifier	Name	Description	Indicators					Overall view at this stage
			Fit with Bank policies	Fulfilment of project objectives	Financial perform-ance	Bank handling	Transition impact	
42737	Tele2	Expansion of mobile network in the regions	+	+	+/-	+	+	Successful

Fit with Bank policies

The project is in keeping with the Bank strategy for Russia that aimed to promote the international and regional expansion of local telecoms companies.

The bond issue was the first on the local bond market by a foreign company other than a bank, though there had been several bonds in the market from local competitors in large local conglomerates. Potential investors (including the Bank) were already aware of the government policy on LTE and of the consequent plans for LTE development by the competitors of Tele2 and could have been discouraged from investing. The bond issue was thought unlikely to achieve the desired tenor without the participation of the Bank. Regardless, ultimately it and its successors together raised more than was originally expected. In retrospect Tele2 regards the participation of the Bank as having been very helpful but not strictly essential.

[100] After Federal Antimonopoly Service investigations late in 2010 and the imposition of fines early in 2011, MTS, VimpelCom and MegaFon decreased their national roaming charges by more than 60 per cent.

Fulfilment of project objectives

So far the measurable project objectives have been fulfilled. Tele2 can now more readily fund expansion from operating cash flows instead of loans from the parent company. It has used access to the local capital market for two further bond issues. Of course there is no immediate evidence that having local bond holders can help Tele2 to overcome political difficulties.

Financial performance

The overall financial performance has been declining slightly under growing competitive pressures. For the first half of 2012 the margin on EBITDA was 36 per cent (having been 39 per cent in 2011), partly because of marketing costs, and ARPU was €5.6 per month (having been €5.4 per month in 2011). In comparison with the first half of 2011, the number of subscribers rose by 10 per cent but the increase in the number of subscribers fell by 21 per cent. EBITDA, capital expenditure and free cash flow also rose by 8 per cent, 10 per cent and 59 per cent (respectively) but revenues fell by 2 per cent.[101] The project has perhaps been proceeding for too little time for these changes to have any significance.

Bank handling

The Bank was wanted as an investor because its involvement would give comfort to other potential investors and raise the quality of the bond issue accordingly. Tele2 considers that the Bank involvement in the bond issue was very helpful in this respect but that the bond issue could have happened without it, albeit with lower investor quality.

The Bank offered to raise with the ministry the government policy on LTE but Tele2 preferred to rely on its own discussions with limited success. Recent signals indicate that Tele2 would be interested to see the Bank playing a more pro-active role in this respect.

Transition impact

Increased competition

The Tele2 policy of price leadership enhances competition, which is noticeably more intense where there are operators besides MTS, VimpelCom and MegaFon. For example, mobile telephony prices in Krasnodar were among the highest in Russia before Tele2 entered the region in 2008 and were among the lowest in 2009. Indeed, Tele2 seeks to enter regions where competition is inadequate, as in such regions it can become the price leader without sacrificing its margins.

The project benchmarks for increased competition (capital expenditures of €160 million in 2011 and €170 million in 20012, and a market share of 9 per cent in 2012) were attained.

Market expansion

The project had an objective of market expansion through entry into the 4G consortium planning LTE development in 2012 and the provision of 4G service in 2015. The role of the 4G consortium is no longer clear, following the awards of national 4G licences and the expected merger of Scartel with MegaFon. Tele2 might still need to find other ways of providing 4G infrastructure that do not entail collaboration with its three largest competitors.

Demonstrations of new replicable behaviour and activities

The project had an objective of demonstrating new ways of financing by showing that foreign companies other than banks could issue bonds on the local bond market. After Tele2 issued local bonds, foreign

[101] The rise in free cash flow appears to be due in part to deferred tax payments.

companies such as breweries also did so. The Tele2 bond issues in 2011 and 2012 raised more than was originally expected and arguably had some impact on these other bond issues.

Maintenance of transition impact

Rostelecom is interested in acquiring Tele2 Russia, so that it would gain some of the marketing and operational advantages possessed by MTS, VimpelCom and MegaFon. Tele2 Russia would thereby become part of a company with a presence in Moscow and the right to construct 4G infrastructure nationally. However, acquisition by Rostelecom would be contrary to the aim of the Bank to reduce state ownership.

Findings

Fitting regulation to ICT market circumstances

In regions where mobile telephony penetration is low, operators can increase competition and expand the market without needing number portability. Indeed, in such regions number portability might lead competing operators to pursue the same high-usage customers instead of expanding the market. Moreover, in all regions number portability might increase concentration instead of increasing competition if termination rates are so high that customers are attracted to the same networks as their frequent contacts; in such cases the reduction of termination rates should precede or accompany the introduction of number portability.

When supporting changes in the regulatory environment the Bank should take account of side effects of regulation experienced in comparable circumstances elsewhere. In particular, it should note the relevance to number portability of the levels of termination rates and telephony penetration.

Financing low cost regional operations

In large countries regional operations outside the capital can be successful if they can keep their costs low enough to take account of the low population densities and low incomes in those regions. To do so, telecoms operators might need to use terrestrial or satellite wireless technologies instead of wireline ones. The resulting operations can benefit development greatly and have strong transition impact.

The Bank should pursue operations capable of succeeding where there are low population densities and low incomes.

People consulted

- Alexandr Chekalkin, Director of Treasury, Tele2 Russia
- Marie Baumgarts, Head of Corporate Responsibility, Tele2 AB
- Mattias Schriwer, Treasury, Tele2 AB

Annex 11: Serbia

The market

Table 40: Distribution of subscribers among operators (2011)

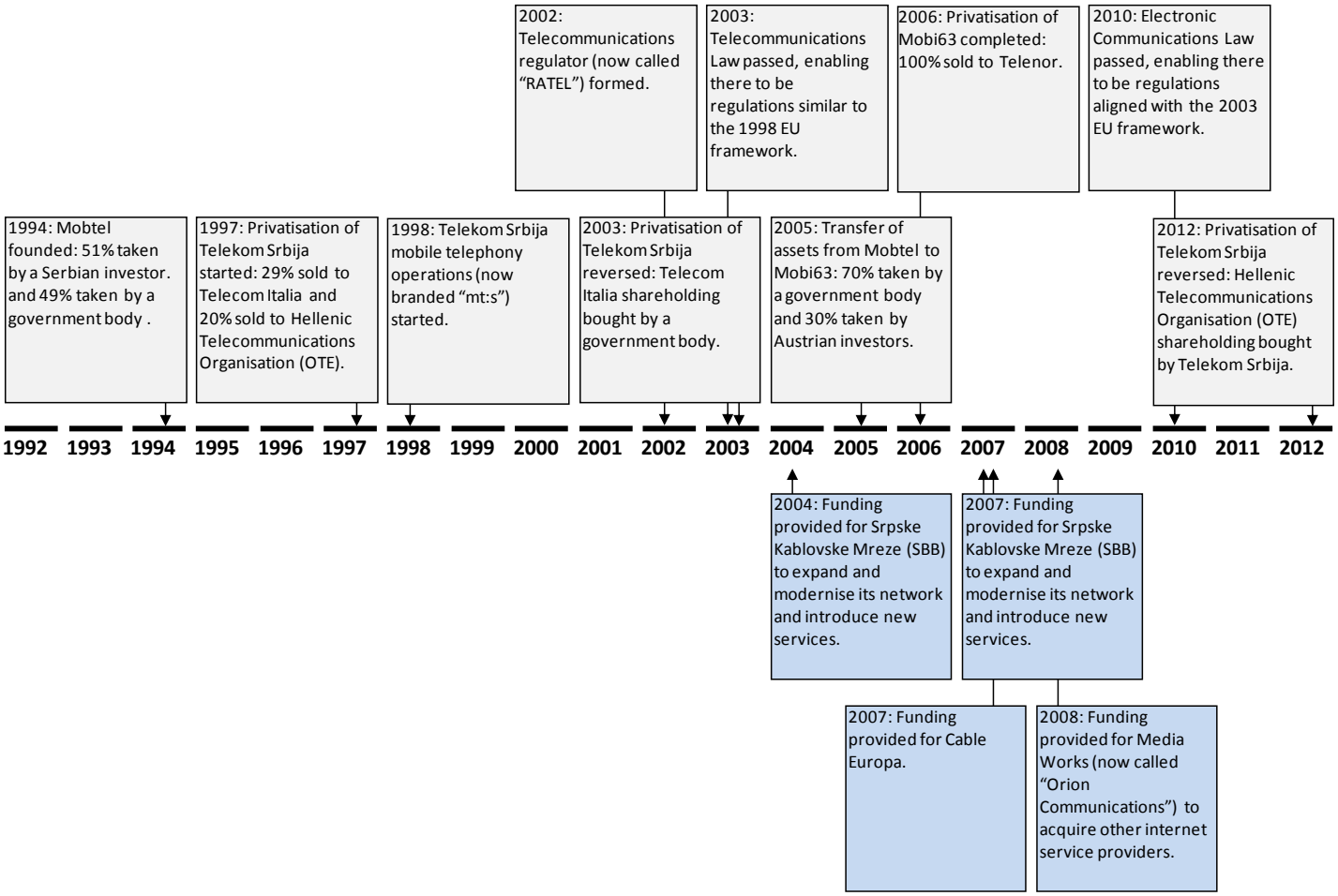
Operator	Fixed services						Mobile services			
	Telephony subscribers		Broadband subscribers		Television subscribers		Telephony subscribers		Broadband subscribers	
	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)
Telekom Srbija	3,000	99	496	51	80	6	5,404	53		
Telenor							3,063	31		
Orion	10	1	97	10						
SBB			281	29	679	51				
PTT					120	9				
IKOM					106	8				
Digi Sat					93	7				
Vip							1,715	16		
Others			94	10	253	19				
Total	3,030	100	968	100	1,331	100	10,182	100	2,800	100

Table 41: Market trends (2011)

Indicator	Fixed services						Mobile services			
	Telephony subscribers		Broadband subscribers		Television subscribers		Telephony subscribers		Broadband subscribers	
	Number	Trend	Number	Trend	Number	Trend	Number	Trend	Number	Trend
Subscribers (000)	3,030	↓	968	↑↑	1,331	↑	10,182	↑	2,800	↑↑
Subscribers per 100 people	43	↑	14	↑↑	19	↑	143	↑	39	↑↑
Revenues (€ 000)	384,211	↑	139,702	↑↑	90,351	↑	758,772	↑		
Revenues per subscriber (€)	127	↑	135	↑↑	68	↑	75	↑		
Outgoing call minutes (000,000)	8,600	↓					10,150	↑↑		
Outgoing call minutes per subscriber	2,838	↓					997	↑↑		
Total call minutes (000,000)										
Total call minutes per subscriber										

Investment in the sector fell from €274 million in 2010 to €243 million in 2011.

Figure 49: National developments and Bank involvements in telecoms (1992-2012)



The regulatory environment

Policy making

The Ministry of Culture, Media and the Information Society has policy documents for ICT development but no action plans. Nonetheless ICT development in Serbia compares well with that in several neighbouring countries, as the ICT development indices in Annex 5 show.

Currently the priority of the ministry is to achieve digital switchover from analogue terrestrial television to digital terrestrial television in two years, so that spectrum can be released for broadband.

Regulation

The regulator, the Republic Agency for Electronic Communications (RATEL), works within a policy position based on the 2003 framework. Many regulations drafted by RATEL, including the revised spectrum allocation plan, await ratification by the ministry. RATEL acknowledges that the existing law has many defects and that it must now proceed to the implementation of the 2009 framework.

Market access

The incumbent operator, Telekom Srbija, still has almost all the fixed telephony market. The alternative operators, Orion and Telenor, have held licences for some years but have been slow to achieve interconnection. A level playing field for competition was supposed to arrive in 2010 but it was still coming in 2012, with the introduction of Local Loop Unbundling (LLU), the regulation of interconnection tariffs, the

opening of fixed telephony to all and the launch of fixed telephony by the largest cable television operator, Srpske Kablovske Mreze (SBB). Alternative operators can use the Telekom Srbija ducts for their own fibres but doing so is expensive. Though these circumstances do not seem very propitious for competition, among the potential EU members in south-eastern Europe Serbia has the highest proportion of ADSL connections provided by alternative operators (23 per cent).[102]

Orion, the third largest fixed broadband operator and a client of the Bank, feels that regulatory decisions tend to assume that Telekom Srbija will not and need not change its operational systems and working practices to accommodate the needs of competition. Indeed, as the Director of RATEL explained, "you have to understand that Srbija Telkom has its own architecture so interconnection can be difficult to achieve." For instance, because broadband and telephony share the same physical line, Telkom Srbija disconnects Orion broadband customers who fail to pay Telekom Srbija telephony bills. The Telekom Srbija systems should be capable of avoiding this.

There have been suggestions that RATEL is very slow to act and that since the change of its Director more decisions have favoured Telekom Srbija.[103] Orion and Telenor each spent about 18 months obtaining interconnection with Telekom Srbija.

Bank operations

Strategy

The Bank strategy for Serbia approved in 2007 aimed to promote competition, commercial orientation and an enhanced role for the private sector in critical infrastructure sectors, including telecoms. Much of the emphasis on telecoms in the strategy was on Kosovo. However, the Bank has not been able to complete any transaction in telecoms in Kosovo.

Some of the projects in Serbia are financed by the Western Balkans Local Enterprise Facility. This aims to promote small and intermediate local companies. These are typically chosen to be recently established companies with high growth rates, opportunistic approaches and good opportunities to expand regionally. They can often benefit by achieving transition impact objectives related to market expansion, new products or processes, successful restructuring or improved standards of corporate governance and business conduct.

Technical cooperation

The Director of RATEL, who was appointed in 2010, was aware of visits by the ICT team but not of any technical cooperation projects. Previously the Bank, through the Legal Transition Programme, had worked with RATEL to develop a clear and concise legal framework by addressing such matters as licensing and tariff policy. Moreover, the Bank organised a successful conference in Belgrade in 2010 to promote competition in different infrastructure sectors.

[102] The next highest is Albania, with 17 per cent. Annex 5 provides more general figures about fixed broadband penetration.

[103] This is not necessarily disadvantageous to Orion or Telenor, because, in general, the playing field is tilted towards larger ISPs; for example, Telekom Srbija sells international interconnect in large blocks that only the larger ISPs want.

Investments

Table 42: Bank telecoms investment projects (1992-2012)

Identifier	Name	Description	Signing date	Financing sector, type and value (€ 000)
	Srpske Kablovske Mreze (SBB)	Expansion and modernisation of cable network and introduction of new services, including broadband	07 June 2004	Private debt 10,660
	Srpske Kablovske Mreze (SBB)	Expansion and modernisation of cable network and introduction of new services, including broadband	07 June 2004	Private equity 5,330
37849	**Srpske Kablovske Mreze (SBB)**	Expansion and modernisation of cable network and introduction of new services, including broadband	19 February 2007	Private debt 1,500
37835	**Project Cable Europa**	Increase in penetration of cable television, broadband and virtual private networks	30 May 2007	Private equity 9,554
39039	**Orion Communications (Media Works)**	Acquisition of a stake in a broadband operator, with a view to consolidating several operators into a national one	19 December 2008	Private debt 6,000
40051	**Orion Communications (Media Works)**	Acquisition of a stake in a broadband operator, with a view to consolidating several operators into a national one	22 December 2008	Private equity 0.001

Of these projects, the Orion ones were selected for further study.

The project reviewed

Background

The project was set up by Greenhouse Investments Limited (GIL) with Media Works (the largest wireless ISP) to expand Media Works. Media Works first took over Neobee (with 10,000 customers the largest ISP in Vojvodina, where there is a cluster of ICT companies) and then took over Sezam Pro, the largest independent ADSL provider in Serbia, with 40,000 customers. Media Works changed its name to Orion (or, more fully, Orion Communications) in 2010.

The Bank provided €6 million convertible debt alongside GIL to finance the expansion which was intended to proceed partly through the acquisition of smaller companies and consolidation of the market. However, the company changed its expansion strategy shortly after closing the financing transaction in 2008 – the original plan proposed acquisitions alongside organic growth, but the new strategy allowed bidding for a fixed wireless licence. The change in strategy was driven by the high prices that acquisitions might involve and by the opportunity to get the licence.[104] Orion believed that being the first alternative operator in any sector would greatly enhance its position when full liberalisation made entry to the sector easy for all. It also believed that full liberalisation would happen faster than it has been happening.

[104] The licence was offered to legitimise the existing provision of fixed telephony by Telekom Srbija using cdmaOne; Orion noted the opportunity to offer fixed broadband using CDMA2000.

Though Orion has considered various other large acquisitions, it has not made any as yet and indeed does not have the funding needed to make any. Instead its emphasis has shifted to acquiring the assets of small companies, which are typically ISPs using WiFi to serve between 500 and 3,500 subscribers each in rural areas.[105] These acquisitions (of the subscribers and equipment but not the staff or the companies themselves) are funded by paying the owners of the companies half the monthly revenues for 24 months.

Orion is now the third largest fixed broadband operator in Serbia, behind Telekom Srbija and SBB. It is also the second fixed telephony operator but its share of that market is small and likely to be surpassed in terms of revenue by Telenor (and in terms of subscriber numbers and revenue by SBB when that starts to provide fixed telephony late in 2012). To provide broadband it uses:

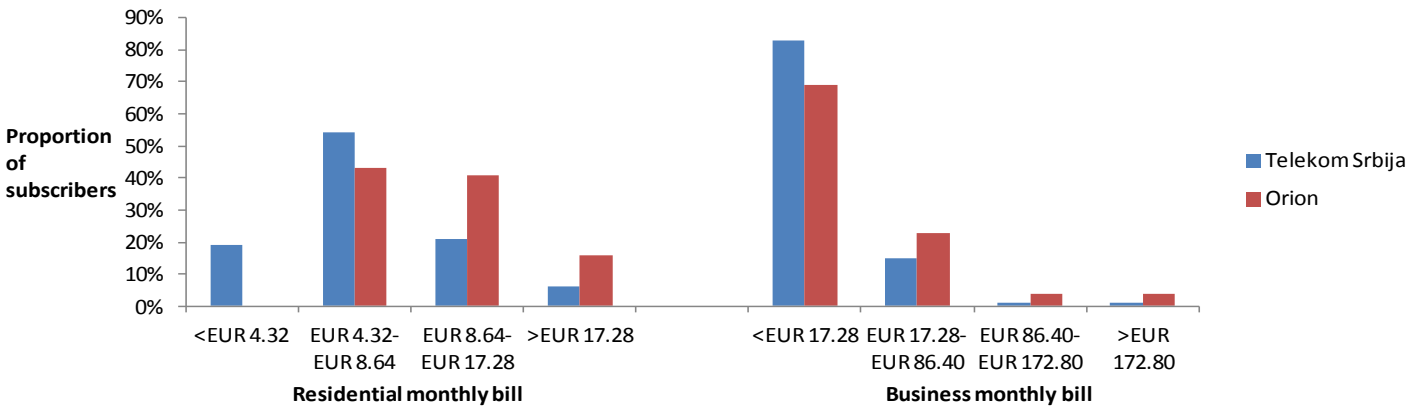
- Telekom Srbija copper, DSL access multiplexors and backhaul in Bit Stream Access (BSA)[106]
- its own fibre, in Telekom Srbija ducts, to buildings where it has its own DSL access multiplexors
- its own CDMA2000 and cdmaOne, which can offer broadband speeds of up to 1Mb/s in Belgrade (and, in the future, in Novi Sad, Niš and Kragujevac) but only narrowband speeds of up to 150 kb/s elsewhere
- its own WiFi (for which it needs no licence), which comes from its acquisitions in rural areas
- its own WiMax (for which it has a licence), which is encouraged only for existing installations.

Orion does not seem to be using Local Loop Unbundling (LLU). Telekom Srbija is now obliged to offer LLU but there are many ways in which an incumbent operator can frustrate or exploit the intentions of alternative operators for its own purposes. The Director of RATEL appeared to be unaware of these; his view appeared to be that laying fibre to buildings (presumably in the existing Telekom Srbija ducts) was so cheap that, rather than exploiting LLU, it was the way in which alternative operators should develop broadband infrastructure. However, he said nothing about making duct access pricing cost-based and duct access operation non-discriminatory.

The particular strength of Orion lies in its contacts with government and therefore with the many enterprises that are publicly owned.

Orion does not aim to be a price leader. Rather, it aims to provide high quality reliable and innovative services, designed around different market segments (residential users, small and medium enterprises, large enterprises, public administrations and wholesale). This is borne out by Figure 49 – Orion has more higher-paying, and fewer lower-paying, subscribers (both residential and business) than Telekom Srbija. Moreover the average monthly bills for business subscribers of Telenor Srbija, Orion and Telenor were approximately €231, €716 and €9,749 respectively.

Figure 50: Proportions of subscribers with particular monthly bills



Ratings

Table 43: Summary project evaluation

Identifier	Name	Description	Indicators					Overall view at this stage
			Fit with Bank policies	Fulfilment of project objectives	Financial perform-ance	Bank handling	Transition impact	
39039	Orion (Media Works)	Acquisition of a stake in a broadband operator, with a view to consolidating several operators into a national one	+	+/-	-	+	+	Partly successful
40051								

Fit with Bank policies

By combining several ISPs and offering fixed telephony Orion aimed to build a strong competitor to Telekom Srbija in fixed telephony and fixed broadband. By building on the entrepreneurial skills and excellent connections of one of those ISPs, and bringing in experience gained from building service providers in Eastern Europe, it aimed to orient the sector to commercial ends. The company was entirely privately owned, with no public ownership. The project was therefore certainly directed to promoting competition, commercial orientation and an enhanced role for the private sector in telecoms, as advocated in the Bank strategy for Serbia.

The major shareholder required the involvement of the Bank in order to secure its own commitment. Orion was a small company requiring significant funding to grow in a poorly developed sector. Local banks were expected to have difficulty financing such a project, and the stock market was shallow.

Fulfilment of project objectives

Orion was intended in 2008 to come into being by acquiring 65 per cent of Media Works and 100 per cent of Neobee; thereafter it was intended to grow, both organically and by the acquisition of other companies located in various regions across Serbia, to create a national network. There was potential also to extend to adjacent countries such as Montenegro and Bosnia and Herzegovina. Though these intentions were put into effect to some degree (most prominently through the acquisition of Sezam Pro), the company changed its expansion strategy to reduce the emphasis on acquisitions.

The objectives entailed, within five years, capturing approximately 20 per cent market share of the corporate telecoms market and a significant share of the consumer telecoms market, and having revenues of €60 million. After three of the five years had elapsed, the company had revenues of €19.8 million.[107] A cause of the shortfall is the difficulty in making acquisitions and the consequential change in strategy. Indeed the board recognised that this change in strategy would delay profitability when agreeing to it early in 2009.

While the market shares might not be those intended, Orion contributed to the development of the market by consolidating smaller companies that would have found it much more difficult to compete on their own.

[107] Orion has not provided a breakdown of its customers according to market segment.

Financial performance

At the time of closing the transaction, the expectation was that between four and five years later that the loan would be converted into shares and the Bank would exit from the company. The EBITDA for 2012 (four years on from the transaction) was projected then to be €11.5 million; it is forecast now to be €3.8 million. The corresponding projected and actual figures for 2011 were €9.0 million and €1.4 million.

Currently Orion recognises that it will never compete in scale with Telekom Srbija or SBB but it remarked that to achieve a favourable exit it had to be at least second in the market. This might be achievable if Orion succeeds in consolidating the cable television companies that individually lack the financing and expertise needed to face competition from SBB and that might be tempted by offers resembling those made to the ISPs using WiFi.[108]

Bank handling

A dispute within GIL occupied the management and shareholders of Orion for a year and a half. One of the two partners in GIL made apparently unauthorised payments and used the absence of a formal partnership agreement as a lever when the other partner threatened legal action. In addition, the legal documentation of the financing transaction created difficulties in preventing one partner in GIL from being obstructive and the other partner from being a senior manager of Orion. The Bank received reports on the dispute and proposed a course of action that eventually led to the settlement of the dispute. Nevertheless, due diligence by the Bank before the closing of the transaction might have disclosed the gaps in the legal documentation or questions about the suitability and compatibility of the partners in GIL.

The major shareholder, GAM Investment Managers Limited (formerly called Augustus Asset Managers Limited), with two seats on the board, appears to change its mind frequently and to have little interest in the company now. The Bank continues to act as an honest broker between the shareholders.

The Bank contribution to the board of the company has been very useful in providing expertise in marketing, investment and the cable television market.

Transition impact

Increased competition

The transition impact objectives at the time of project approval did not include one for increasing competition. However, Orion aimed to build a strong competitor to Telekom Srbija, and therefore expected to compete with Telekom Srbija for fixed telephony subscribers as well as fixed broadband subscribers. Consequently there was an implied objective of increasing competition against which the project outcome can be assessed.

A standard expectation from increased competition is lower prices. Yet since 2009, for a RATEL "basket" of service,, as a proportion of income, fixed telephony prices have fallen by 2 per cent and fixed broadband prices have risen by 13 per cent and both have risen in absolute terms.[109]

[108] Some ISPs using WiFi might themselves have opted for having their assets acquired because they could not face competition from Orion.
[109] However, monthly subscription charges, local call charges and national call charges are lower in Serbia than in the other potential EU members in south-eastern Europe.

Orion has therefore not brought about lower prices. In fact, it does not aim to compete on price – it responds to Telekom Srbija offers of "six month's free broadband usage" by complaining about cross-subsidy to the Anti-Monopoly Commission not by lowering its prices. Moreover, the fixed telephony tariffs of Telekom Srbija have not been rebalanced, so local call charges are low relative to national call charges and Orion might find difficulty in matching them.[110]

Orion is considering the acquisition of a competitor that might now be realistically priced as its parent company is in administration. That competitor provides low prices to its customers and its acquisition by Orion would lead to higher prices. However, the main alternative to its acquisition by Orion is going out of business, in which case its former subscribers would need to turn to another ISP, presumably also with higher prices. Acquisition by Orion would enlarge the chief potential competitor to Telekom Srbija and SBB, thereby strengthening competition in the fixed telephony and fixed television markets.

More generally, if Orion acquires a competitor in its "home" market (fixed broadband) it increases market concentration and decreases price competition in that market. In the long term, if Orion grows large enough to challenge the duopoly of Telekom Srbija and SBB, it could enhance competition in terms of both price and quality across all fixed services.

Demonstrations of new replicable behaviour and activities

The project had an objective of demonstrating new products or processes by extending the use of WiMax. However, Orion has chosen instead to sustain existing WiMax customers but not to market WiMax actively. This choice is in line with common views that WiMax has failed to live up to its promise, though it was once regarded as particularly relevant to South Eastern Europe. Orion has nonetheless demonstrated innovation by:

- being the one of the first operators other than Telekom Srbija to offer fixed telephony[111]
- being the one of the first operators other than Telekom Srbija to have a substantial fibre network capable of providing business and wholesale services[112]
- introducing bundles comprising fixed telephony, fixed broadband and fixed television.

The project had an objective of demonstrating new products or processes by introducing better financial reporting and customer relations management systems and reducing complaint response times. The Orion emphasis on offering high quality services and the proportions of higher-paying subscribers point to some success in this respect.

Improved standards for corporate governance and business conduct

The project achieved its objective of improving standards for corporate governance and business conduct. Orion introduced larger company structures and recruited specifically trained and experienced staff, including the Chief Financial Officer, to achieve economies of scale and combine businesses originally owned and operated by families. It is highly relevant to the Western Balkans Local Enterprise Facility, which financed it and aims to achieve transition impact by promoting the private sector, particularly through small and intermediate local enterprises.

[110] An alternative operator will have few switches and will interconnect with the incumbent at few points, and therefore will treat all calls as national ones.
[111] Orion acquired its licence before Telenor did so.
[112] SBB would dispute that Orion was the first.

Maintenance of transition impact

The factors that have led to the success of Orion in Serbia, such as the contacts with the government, might not be so pertinent to Montenegro and Bosnia and Herzegovina.[113] They are also ones that one would want to see wither away as the market matures. Though the regulatory environments are related, they are different in detail. Therefore, while Orion might achieve economies of scale by expanding into adjoining countries, it might not achieve economies of scope.

Findings

Analysing consortium and partnership agreements

Amicable arrangements between business partners can break down under stress. If the legal formalities have not been completed adequately the arrangements can be particularly distracting or expensive to repair.

When setting up finance with multiple partners the Bank should scrutinise the arrangements with (and, as far as possible, between) the other partners, especially in relation to dispute handling. In particular, it should ensure that minority parties are not allowed to block progress after the closing of the transaction.

Encouraging access to the telecoms networks of utility companies

Utility companies often have extensive optical fibre networks that are greatly underused and will remain so even when "smart grids" are introduced.

The Bank should encourage the telecoms networks of utility companies to be made available for commercial purposes through its discussions with the governments and the companies and work by its ICT, Municipal and Environmental Infrastructure and Power and Energy teams.

People consulted

- Irena Posin, Assistant Minister for European Integration
- Jasna Matić, State Secretary, Ministry for Culture, Media and the Information Society
- Milos Stevanović, Director of Digital Agenda, Ministry of Culture, Media and the Information Society
- Milan Janković, Director, RATEL
- Hrvoje Katičić, Chief Financial Officer, Orion
- David Schoch, Founding Shareholder and Member of the Board of Directors, Orion

[113] However, both countries have very close ties with Serbia and the Chief Executive Officer of Orion has many connections in them too.

Annex 12: Key findings relevant to the southern and eastern Mediterranean (SEMED) region

The market

Table 44: Distribution of subscribers among operators (Egypt, 2011)

Operator	Fixed services		Mobile services	
	Telephony subscribers		Telephony subscribers	
	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)
Telecom Egypt	8,995	100		
Vodafone			35,536	44
Mobinil			31,574	39
Etisalat			13,280	17
Total	8,995	100	80,390	100

Table 45: Distribution of subscribers among operators (Jordan, 2011)

Operator	Fixed services		Mobile services	
	Telephony subscribers		Telephony subscribers	
	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)
Orange	424	100	2,756	37
Zain			2,823	38
Umniah			1,904	25
Total	424	100	7,483	100

Table 46: Distribution of subscribers among operators (Morocco, 2011)

Operator	Fixed services		Mobile services	
	Telephony subscribers		Telephony subscribers	
	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)
Maroc Télécom	1,241	35	17,126	47
Méditel	22	1	12,034	33
Inwi	2,303	64	7,395	20
Total	3,566	100	36,554	100

Table 47: Distribution of subscribers among operators (Tunisia, 2011)

Operator	Fixed services		Mobile services	
	Telephony subscribers		Telephony subscribers	
	Number (000)	Proportion (per cent)	Number (000)	Proportion (per cent)
Tunisie Télécom	1,181	96	6,694	37
Tunisiana			4,625	54
Orange	46	4	1,181	9
Total	1,227	100	12,500	100

Table 48: Market trends (Egypt, 2011)

Operator	Fixed services		Mobile services	
	Telephony subscribers		Telephony subscribers	
	Number	Trend	Number	Trend
Subscribers (000)	8,995	↓	80,390	↑↑
Subscribers per 100 people	11		101	

Table 49: Market trends (Jordan, 2011)

Operator	Fixed services		Mobile services	
	Telephony subscribers		Telephony subscribers	
	Number	Trend	Number	Trend
Subscribers (000)	424	↓	7,483	↑↑
Subscribers per 100 people	7	↓	120	↑↑

Table 50: Market trends (Morocco, 2011)

Operator	Fixed services		Mobile services	
	Telephony subscribers		Telephony subscribers	
	Number	Trend	Number	Trend
Subscribers (000)	3,566	↑	36,554	↑↑
Subscribers per 100 people	11	↓	114	↑

Table 51: Market trends (Tunisia, 2011)

Operator	Fixed services		Mobile services	
	Telephony subscribers		Telephony subscribers	
	Number	Trend	Number	Trend
Subscribers (000)	1,227	↑	12,500	↑↑
Subscribers per 100 people	11	↑	116	↑↑

As Annex 5 indicates, fixed telephony penetration has fallen since 2005 in all the countries except Morocco. The exception of Morocco is particularly noteworthy because Morocco has fixed telephony prices that, for a standard basket, appear to be almost ten times those in Tunisia, for example, despite its having three competing fixed network operators.[114] The annual fall in penetration has been slowing and in Tunisia has even been reversed where in 2011 the new entrant appears to have attracted new subscribers.

Mobile telephony penetration has been rising in SEMED region since 2005. This has been most notably so latterly in Egypt, where subscriber numbers have increased by a factor of five in five years with the widespread adoption of prepaid services. Penetration has had similar rates of growth in the other countries in some years.

[114] The most popular of these operators, Inwi, actually provides a service offering limited mobility (using CDMA). The "premium" nature of this service might be one factor leading to the high prices.

There is essentially no cable television in SEMED outside closed areas such as hotels and apartment buildings; satellite television is used instead. Accordingly, Internet infrastructure depends largely on the telephony networks though there are also some specially provided connections.[115] The terrestrial television providers are largely state-owned and outside the "pay" television market.[116] The governments also have shareholdings in satellite television service retailers, such as Cable Network Egypt.

The demographic trends implicit in Annex 5 are stimulating demand – between 25.4 per cent in Tunisia and 39.4 per cent in Jordan of the inhabitants of the countries are under 15 years old. Even the lower of these figures is ten percentage points higher than any in south-eastern Europe outside Albania, which has a comparable figure.

There has been considerable investment in SEMED in the ICT sector by foreign operators, such as:

- Batelco (through Umniah in Jordan and under its own name in Egypt)
- Etisalat (under its own name in Egypt)
- Orange (through Mobinil in Egypt, through Méditel in Morocco, and under its own name in Jordan and Tunisia)
- Qtel (through Tunisiana in Tunisia)
- Vodafone (under its own name in Egypt)
- Zain (through Inwi in Morocco and under its own name in Jordan).

Several of these foreign investors have their own governments as shareholders. There also remain significant state shareholdings in the incumbent operators Telecom Egypt (80 per cent); Jordan Telecom ("Orange Jordan") (29 per cent); "Maroc Télécom ("Itissalat Al-Maghrib") (30 per cent); and Tunisie Télécom (65 per cent).[117] Telecom Egypt has itself a 49 per cent shareholding in Vodafone Egypt.

The regulatory environment

Policy making

All the countries regard ICT as important to their futures. ICT accounts for between 3 per cent in Egypt and 11 per cent in Tunisia of the Gross Domestic Product (GDP). The penetration and development figures in Annex 5 suggest that Jordan and Tunisia are perhaps the furthest ahead in adopting ICT but that even they are well behind some countries of south-eastern Europe and are more comparable with Albania than with Serbia.

The countries are vying to develop physical infrastructure specifically to support ICT. For instance:

- In Egypt the public-private partnership model has proved instrumental. An example is the Smart Village Cairo, a 3 million square metre IT park housing global ICT firms such as Alcatel

[115] For instance, In Jordan there are optical fibre providers like Jordan Cable Services, as well as five WiMax operators in Amman. One of the five WiMax operators has Qtel as a major investor and could serve as the core of consolidation.

[116] In Morocco and Tunisia the switch to digital terrestrial television is to be completed in 2015. In Egypt and Jordan there are no plans for the switch yet, and there is a case for simply replacing terrestrial television by satellite television, which is already received widely.

[117] In Tunisia in 2011 the government confiscated the 25 per cent shareholding in Tunisiana (the second largest mobile network operator) and the 51 per cent shareholding in Orange Tunisie (the third largest mobile network operator) from the son and son-in-law of the former president. The Tunisiana shareholding is now being auctioned. France Télécom said it was “proud to associate itself" with the son of the then president when Orange Tunisie was formed in 2010.

Lucent, Ericson, Nokia Siemens, Hewlett Packard, IBM, Microsoft and Vodafone. Several of these use Egypt as a base for regional operations.

- In Tunisia plans have been put forward (but not yet realised) for a development financed by EUR 3 billion from the Gulf region. This Telecom City is designed to cater to the location, infrastructural, research and development, educational and support service needs that will allow telecoms and IT organisations to flourish.
- All the SEMED governments are encouraging the development of Arabic Internet content through their e-government programmes, with lesser (in Jordan) or greater (in Tunisia) degrees of success.

The governments are also encouraging the adoption of e-commerce but that is hampered to some extent by limitations in the local postal and financial services.

Regulation

The regulators are nominally independent from the ministries responsible for making policy and for supervising the government shareholdings. In other respects the regulatory frameworks are, on paper, somewhere between the 1998 framework and the 2003 framework. For instance, the markets are liberalised, in that entry is open to all companies that can obtain licences, but there are still licences, not general authorisations.[118] Moreover, some of the more onerous parts of the 1998 framework and the 2003 framework are not always applied. In particular:

- Interconnection prices might be declared to be "cost-based" without assembling the cost data or agreeing the basis of the calculations
- Significant Market Power (SMP) might be determined without performing market reviews (which often have predictable conclusions)
- Areas in which universal service obligations apply might be allocated to operators without questioning or comparing the costs that the operators claim to incur[119]
- The interpretation of the regulatory framework can sometimes be erratic and appear to favour the powerful.[120] This might be because the regulators lose good employees not merely to operators (as happens throughout the developing world) but also to regulators in the Gulf region.

Market access

There is Local Loop Unbundling (LLU) in the SEMED region. However, Internet service providers using it face obstacles that incumbent operators often impose in the absence of functional separation between

[118] In Egypt an attempt in 2008 to licence a second fixed network operator failed because of the global financial crisis.
[119] For instance, in Morocco the "pay or play" system lets operators state where they propose to provide universal service and what the costs would be, without any competition between operators to lower the costs or raise the quality of service.
[120] One example is from the postal sector in Jordan, where the postal law is much less well drafted than the telecommunications law. A logistics company entered into a contract with the Ministry of Justice (no less) to deliver legal documents, in apparent contravention of the legal monopoly of the universal service provider, Jordan Post, to deliver "packages"; the logistics company was just asked to desist. An unemployed man started to deliver flowers from various shops on their behalf; he was taken to court and fined about €300 (which is roughly the monthly salary of a recently qualified professional).

their wholesale and retail operations.[121] This might be one reason why there are not many Internet service providers besides the telephony operators themselves.

Numbers can be ported between networks.[122] The risk of increasing concentration due to number portability is probably low because, except in Tunisia, the first and second operators both have large market shares and termination rates are undergoing regulation.[123]

There are no Mobile Virtual Network Operators (MVNOs) but companies expect to introduce them in Egypt and Morocco shortly.[124]

Bank operations

Strategy

The mandate of the Bank is expanding to cover the SEMED region, with a focus on Egypt, Jordan, Morocco and Tunisia initially. The case study country that most resembles these countries is probably Albania, though that has a much smaller population even than Jordan.

More generally, the countries share various characteristics with the countries of south-eastern Europe so many findings from evaluations there apply to them. However, there are also significant differences from the countries of south-eastern Europe; in particular, the SEMED region has a much younger, but much less well educated, population and is influenced by the Gulf region, which both attracts employees and provides investment.

The findings from the evaluations in this report and the findings summarised in Annex 4 that are especially relevant to the SEMED region are given later.

Technical cooperation

Two of the SEMED countries are monarchies, where the royal court has more influence than the elected government, and the other two are not yet fully functional democracies in which resources might be small, executive decisions might lack strategic direction and corrupt practices might be culturally embedded.

Perhaps because of this, technical cooperation projects funded by international financial institutions and development agencies in the ICT sector have not always been as successful as their instigators expected. For instance:

- In Egypt a consultancy proposed an implementation technique (with minimum subsidy auctions) for the universal service policy on behalf of the regulator. The consultancy was ignored and another consultancy was appointed. It provided full implementation details of a similar technique; six years later, neither technique has been used.
- In Jordan a consultancy devised an ICT policy that included action plans for the ministry. The consultancy was dismissed, with the claim that its proposals were not suitable for the country,

[121] In Tunisia the operators have not yet reached agreement on the rules governing LLU, so consultants have been appointed to provide a solution. Elsewhere there has been LLU for several years (since 2002 in the case of Egypt).
[122] In Tunisia the rules governing number portability have been determined, with a central data base, but the implementor of the central data base has yet to be selected. Elsewhere there has been number portability for some years (since 2007, in the case of Morocco).
[123] However, regulated termination rates have been annulled by a court in Egypt and have not yet been defined in Tunisia.
[124] In Jordan there was an attempt to introduce an MVNO in 2010. It was ultimately rejected at high levels in the country for reasons that remain obscure.

and another consultancy was appointed. It changed some words from the old policy and omitted all possible actions. This was acceptable to the ministry.

Investments

Large investment projects have probably been slowed down by the political upheavals of 2011 but there appears to be no shortage of major investors in the main companies. Even some stand-alone Internet service providers have received investments from foreign operators (typically from the Gulf region) such as Qtel in Jordan. However, the Bank might still be able to contribute to the unfinished privatisations and to universal service developments.[125]

Access to credit remains difficult for SMEs throughout the region. The Bank could help to develop various banking initiatives underway to encourage these enterprises to invest in IT. In Egypt, for example, these enterprises comprise more than 50 per cent of the regional business community and are likely to generate the main requirements for IT applications over the next few years.

All four countries see themselves as outsourcing and offshoring destinations. Some of the investment for these purposes will come from large foreign companies[126] but others will come from within the countries themselves, so they could welcome participation by the Bank.

The governments are themselves substantial purchasers of IT services, for which they are quite likely to favour public-private partnerships in which the Bank might play a role.

Findings particularly relevant to the SEMED region

Facilitating improvements in broadband penetration

Broadband penetration is still low throughout the SEMED region. In all four countries fixed telephony penetration and fixed broadband penetration are rather like those in Albania and are therefore small fractions of those in Serbia.

Recommendation: The Bank should aim to develop opportunities for financing broadband infrastructure with both operators and local authorities.

Promoting the use of ICT by small and medium-sized enterprises and in households

SMEs find difficulties in obtaining credit. In helping them to overcome these difficulties the Bank could encourage their use of ICT by incorporating suitable objectives in projects. The low levels of ICT skills can be countered in the region as it has been elsewhere (in southern and eastern Africa, for example) by an emphasis on IT applications that are accessible from mobile telephones. The youthful population can be relied on to adopt the applications if they see the advantages.

Recommendation: The Bank should use projects in other sectors to encourage investments in ICT, particularly projects with SMEs which could have transition impact objectives of demonstrating ICT applications and projects with public clients (such as municipalities) which could include well-designed programmes to extend the breadth and depth of broadband use.

[125] In Egypt there might also be the introduction of a fourth mobile network operator, or at least the entry of Telecom Egypt into the mobile telephony market as a Mobile Virtual Network Operator (MVNO) and the consequent divestment of the Telecom Egypt shareholding in Vodafone Egypt.

[126] For instance, in Egypt Vodafone employs between two and three thousand people in customer services, technical support, software development and hosting to serve other Vodafone companies.

Supporting the consolidation of alternative operators

In each of the countries there are a few large telephony operators that own some of the Internet service providers. There are also other small Internet service providers, especially in Jordan; others might emerge as the governments become less anxious to control sources of information. To be viable and to offer possible alternatives to the large telephony operators, these will need to combine; the Bank could assist if capital from the Gulf region is not forthcoming.

Recommendation: The Bank should pursue projects aiming to consolidate alternative operators that are strong in different markets, either because they deliver different services or because they operate in different parts of the country.

Encouraging access to the telecoms networks of utility companies

Telecom Egypt uses some of the optical fibres of the electricity transmission company (for connections with Jordan) but there are other possible sources of optical fibres including the electricity distribution companies, the natural gas transmission company and the railway company. Similar remarks apply to Jordan, Morocco and Tunisia (though with smaller numbers of utility companies).

Recommendation: The Bank should encourage the telecoms networks of utility companies to be made available for commercial purposes, through its discussions with the governments and the companies and work by its ICT, Municipal and Environmental Infrastructure and Power and Energy teams.

Participating in the privatisation of telecoms companies

There are still large state shareholdings in telecoms companies, especially in Egypt and Tunisia, where repeated attempts to privatise the incumbent operators have not been successful. The Bank might have a catalytic role in privatisation.

Recommendation: The Bank might play a role, even in advanced transition countries, by providing equity or quasi-equity alongside strategic investors during the privatisation of telecoms companies.

Increasing awareness of demonstrable project successes

The Bank is making efforts to become known in the region (holding a conference in Jordan on electronic communications, for example). It could usefully extend these by spreading information about how and why particular projects in other countries of operations succeeded.

Recommendation: The Bank should consider ways of making the experiences and results of its most successful projects more widely known by holding formal or informal seminars and organising study tours for potential clients.

Better targeting of technical cooperation programmes

The practice of regulation in the region sometimes falls short of the theory. There is a shortage of skills and experience in the regulators and the commercial courts. The shortage can be even more acute in the ministries, which have little flexibility in adjusting salaries to keep good employees, so the problem is especially severe where some regulatory functions, such as competition monitoring in Jordan, are exercised by the ministries.

Recommendation: The Bank should continue to support the staff of regulators and judges in commercial courts with training (through the Legal Transition Programme, for example), focussing on effective monitoring and enforcement more than legislation.

Incorporating trends in ICT market forecasts

The countries of operations have fixed telephony penetration rates that appear to be falling (even though they are much lower than those in most countries in south-eastern Europe, for example). This fall might be halted or even reversed through the adoption of fixed broadband and the introduction of new service bundles. Overall the position remains unclear.

Recommendation: When preparing projections and setting financial and operational benchmarks (including those for transition impact) the Bank should take account of shifts in demand experienced in comparable circumstances elsewhere; in particular, it should note the possibility of mobile telephony substituting for fixed telephony.

Reconciling public information policies with confidentiality of financing

Projects that aim to build companies by acquisition, such as those that might be appropriate for Internet service providers and for IT suppliers, face the problem that the prices of acquisition targets increase if the clients are known to have Bank financing.

Recommendation: When setting up projects to facilitate acquisitions the Bank should ensure that, following the signing of the term sheets and the mandate letters, the clients enter into initial agreements with the intended acquisitions to lock the prices before the provision of the financing becomes publicly known.

Understanding national information technology markets by working with intermediaries for financing if necessary

The IT applications (and, to some extent, the IT services) required in the region are likely to be unknown to the Bank. Specialist expertise is needed not just to develop them but also to understand the size and nature of the markets for them in particular countries and across the SEMED region as a whole. In the expected markets there must be enough interested and knowledgeable potential users, even though there are generally low levels of IT use.

Recommendation: The Bank should ensure that investments in information technology companies are related to the readiness for such technology in the host countries. In addition, it

should consider channelling financing through specialised regional funds if the readiness is uncertain.

Engaging with other international financial institutions to achieve sector reform

Other international financial institutions and development agencies have been working in the region for many years. Egypt and Jordan, in particular, have been large recipients of aid. It might be useful for the Bank to review the experience of these IFIs in policy dialogue, technical cooperation and investment so as to avoid duplication or repetition and also to make effective use of the funds.

Recommendation: The Bank should coordinate its work more closely with that of other international financial institutions to encourage sector reform.

Providing universal service cost-effectively

The predominance of mobile telephony over fixed telephony, and the range of applications available for mobile telephony, suggest that mobile telephony should be required to be available, accessible and affordable to everyone. Though coverage is high, it is not ubiquitous and prices are very high by international standards. Not all of the regulators have up-to-date views of which areas have coverage or methods for allocating areas to operators that minimise costs.

Recommendation: The Bank should encourage the cost-effective provision of universal service in telecoms, emphasising competitive means such as minimum subsidy auctions and cooperative means such as infrastructure sharing, through policy dialogue with governments and operators.

Motivating client commitment to technical cooperation programmes

As noted earlier, there can be difficulties in the region in ensuring that clients appreciate and use the results of technical cooperation programmes. More receptive attitudes might result if clients contributed effort and, where appropriate, funding.

Recommendation: The Bank should seek increased ownership of technical cooperation results by maintaining involvement at both high and low levels in the client organisation and requesting reimbursement of costs if the client has adequate resources.